DOMINION ENERGY SOUTH CAROLINA

WILLIAMS STATION NEW FGD POND

BERKELEY COUNTY, SOUTH CAROLINA

EPA CCR RULE COMPLIANCE

2022 CCR ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

January 31, 2023

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Executive Summary

Dominion Energy South Carolina, Inc. (DESC) operates a New Flue Gas Desulfurization (FGD) Wastewater Pond (New FGD Pond) (Unit) for the management of coal combustion residuals (CCR) at the Williams Generating Station (Station) located in Goose Creek, Berkeley County, South Carolina. The Unit receives CCR generated from an air quality control system that produces FGD wastewater blowdown waste stream. Management of the CCR at the Unit is performed pursuant to national criteria established in Title 40 of the Code of Federal Regulations (40 CFR), Part 257 (CCR Rule), effective April 19, 2015, and subsequent revisions to the CCR Rule.

The Station conducted two semiannual detection monitoring program (DMP) events in 2022 for the CCR Unit monitoring well network per 40 CFR §257.94. The first semiannual 2022 DMP compliance sampling event was conducted on March 21-23, 2022, with sample analyses completed on April 4, 2022. The second semiannual 2022 DMP compliance sampling event was conducted on September 19-21, 2022, with sample analyses completed on October 5, 2022. These groundwater sampling and analysis activities were conducted in general accordance with the requirements of the Unit's Groundwater Monitoring Plan (GWMP) for the CCR network.

Evaluation of the monitoring results from the first semiannual 2022 event identified exceedances above background values for boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS). A successful Alternate Source Demonstration (ASD) was completed for the potential Statistically Significant Increases (SSIs) during the first semiannual 2022 detection monitoring event. The ASD was certified by a South Carolina-registered professional engineer and is presented in this Report. Monitoring results from the second semiannual 2022 event identified exceedances above background values for boron, calcium, chloride, pH, sulfate, and TDS. An ASD evaluation is being conducted in accordance with the applicable CCR Rule timeframe.

In accordance with 40 CFR Part 257.90(e)(6), the following information is being provided as an overview of the current status of groundwater monitoring and corrective action for the Unit:

i. At the start of the current annual reporting period, indicate whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95.

- At the start of 2022, the Unit was operating under the detection monitoring program in accordance with §257.94.

ii. *At the end of the current annual reporting period, indicate whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95.*

- At the end of 2022, the Unit was operating under the detection monitoring program in accordance with §257.94.

iii. *If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III to this part pursuant to §257.94(e).*

a. *Identify those constituents listed in Appendix III to this part and the names of the monitoring wells associated with such an increase.*

- In 2022, there were SSIs over background for the following Appendix III constituents at the following wells:
  - Boron – MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW FGD-20AR
  - Calcium – MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR
  - Chloride – MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR
  - Fluoride – MW-FGD-19D
  - pH – MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR
  - Sulfate – MW-FGD-17, MW-FGD-18, and MW-FGD-20AR
  - TDS – MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW FGD-20AR

b. *Provide the date when the assessment program was initiated for the CCR unit.*

- The Unit is in the detection monitoring program and has not initiated assessment monitoring to date.

iv. *If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in Appendix IV to this part pursuant to §257.95(g).*

a. *Identify those constituents listed in Appendix IV to this part and the names of the monitoring wells associated with such an increase.*

- The Unit is in the detection monitoring program and Appendix IV constituents were not evaluated in 2022.

b. *Provide the date when the assessment of corrective measures was initiated for the CCR unit.*

- The Unit has not entered the assessment monitoring program and therefore not applicable.

c. *Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.*

- The Unit has not entered the assessment monitoring program and therefore not applicable.

d. Provide the date when the assessment of corrective measures was completed for the CCR unit.

- The Unit has not entered the assessment monitoring program and therefore not applicable.

v. *Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of the remedy selection.*

- The Unit has not entered the assessment monitoring program and therefore not applicable.

vi. *Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.*

- Remedial activities were not initiated or are not ongoing during this current annual reporting period.

Section 1
Introduction

This *2022 CCR Annual Groundwater Monitoring and Corrective Action Report* (Report) was prepared on behalf of Dominion Energy South Carolina (DESC) for the New Flue Gas Desulfurization (FGD) Wastewater Pond (New FGD Pond) (Unit) at the Williams Generating Station (Station) located in Goose Creek, Berkeley County, South Carolina. The original FGD Pond was closed in April 2021 by removal of CCR in accordance with §257.102(c) and the Closure Plan – Amendment 1 (Closure Plan), dated February 2021. The removed CCR was transported offsite for disposal at the Williams Station Highway 52 Landfill. A Closure by Removal Certificate was prepared by Civil & Environmental Consultants, Inc. and dated May 2021 (CEC 2021).

A new FGD Pond was installed within the boundaries of the original FGD Pond which opened in April 2021 in accordance with the CCR Rule requirements. The Unit is managed as a new CCR unit and in accordance with the national criteria established by the CCR Rule. DESC installed a groundwater monitoring system at the Unit that is subject to the groundwater monitoring and corrective action requirements provided under 40 CFR §257.90 through §257.98. In accordance with 40 CFR §257.90(e), DESC must prepare an annual report no later than January 31st for the preceding year, that provides information regarding the groundwater monitoring and corrective action program at the Unit. This Report provides the monitoring and corrective action data and data evaluations for the semiannual CCR monitoring compliance events performed in March and September 2022.

1.1 Site Location

The Station is operated by DESC and is located at 2242 Bushy Park Road in Berkeley County, South Carolina (**Figure 1**). The Station is located approximately 6 miles northeast of Goose Creek, South Carolina. The Unit is located onsite approximately 2,000 feet north of the generating plant.

1.2 Site History

The Station is an active coal-fired power station located in Berkeley County, South Carolina. The facility began operations in 1973 and operates a single 633-mega-watt coal-fired unit. The Station operates a series of low volume waste treatment ponds in addition to the New FGD Pond. Other CCR materials (solids) are managed at the offsite Highway 52 Landfill. This report addresses the groundwater monitoring activities for the Unit only.

1.3 Key Actions

Key actions for the Unit are as follows:

- Initiated the Detection Monitoring Program (DMP) on April 28, 2021, with the collection of eight (8) baseline/background samples and completed the background monitoring activities on September 23, 2021, pursuant to 40 CFR §257.94(b).
- Placed a copy of the New FGD Pond's Groundwater Monitoring Plan (GMP) documenting the design information for the monitoring wells pursuant to 40 CFR §257.91(e)(1) in the Station's operating record on May 7, 2021, pursuant to 40 CFR §257.105(h)(2).
- Certified the groundwater monitoring system pursuant to 40 CFR §257.91(f) and posted the Certification in the Station's operating record on May 7, 2021, pursuant to 40 CFR §257.105(h)(3).
- Certified the selection of a statistical method pursuant to 40 CFR §257.93(f)(6) and posted the Certification in the Station's operating record on May 7, 2021, pursuant to 40 CFR §257.105(h)(4).
- Conducted the initial DMP compliance sampling event on March 22-23, 2022 and completed the sample analyses on April 4, 2022, pursuant to 40 CFR §257.94(b).
- Completed a successful Alternate Source Demonstration (ASD) per 40 CFR §257.94(e)(2) in response to potential Statistically Significant Increases (SSIs) identified during the statistical evaluation of the data generated from the first semiannual (March 2022) detection monitoring event. The ASD was certified by a South Carolina-registered professional engineer. As required by 40 CFR §257.94(e)(2), a copy of the ASD is included in **Appendix A**. Based on the successful evaluation and the results presented in the ASD, DESC continued with detection monitoring in accordance with 40 CFR §257.94.
- Conducted the second semiannual 2022 detection monitoring between September 19-21, 2022 and completed the sample analysis on October 5, 2022, pursuant to 40 CFR §257.94(b). An ASD evaluation of the data will be performed during the first quarter of 2023 per 40 CFR §257.94(e)(2).
- The Unit remained in detection monitoring for the duration of 2022.

1.4 Monitoring Program Concerns

No problems were encountered during 2022 regarding the detection monitoring system.

Section 2
Site Information

2.1 Monitoring Well Network

The Unit utilizes groundwater monitoring wells that were previously installed at the Station for the original FGD Pond. The Compliance Monitoring Well Network currently consists of two upgradient wells (MW-FGD-16 and MW-FGD-21) to monitor background groundwater entering the surficial aquifer of the Unit and five downgradient monitoring wells (MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR) that serve to monitor groundwater quality downgradient of the Unit. The location of the EPA CCR Rule Compliance Monitoring Well Network is presented on **Figure 2**.

2.2 Monitoring Well Installation and Decommissioning Activities

DESC did not install any new wells or decommission any existing wells in the certified groundwater monitoring system during 2022.

2.3 Groundwater Potentiometric Surface Evaluation

Current and historical static water level data for the Station are summarized in **Table 1**. Per requirements of the CCR Rule 40 CFR 257.93(c), the rate and direction of groundwater flow within the uppermost aquifer beneath the Unit must be determined after each sampling event. Groundwater potentiometric surface maps were prepared using water level data obtained from both semiannual sampling events conducted in March and September 2022. Using the groundwater contours from March (**Figure 3**) and September (**Figure 4**), the average horizontal hydraulic gradient was calculated using the following equation:

$$i = (\mathrm{h}^1 - \mathrm{h}^2)/\mathrm{S}$$

Where:

i = horizontal hydraulic gradient (unitless)
h^1 = water elevation in well 1 (feet)
h^2 = water elevation in well 2 (feet)
S = horizontal distance between well 1 and well 2 (feet)

The groundwater seepage velocity was calculated using the following formula:

$$Vs = ki/\mathrm{n_e}$$

Where:

Vs = Groundwater seepage velocity (feet/day)
k = hydraulic conductivity (feet/day)
i = horizontal hydraulic gradient (unitless)
n_e = effective porosity (percent)

The result for each semiannual event is presented separately in Sections 2.3.1 and 2.3.2. As presented, the estimated groundwater seepage velocity in the uppermost aquifer beneath the Unit is between 19 to 25 ft/year. Furthermore, the overall interpreted data indicates that the groundwater flow direction and velocity remain consistent with previous calculations for the Unit. The groundwater monitoring network continues to monitor the uppermost aquifer in accordance with the CCR Rule.

2.3.1 First Semiannual 2022 Detection Monitoring Program

The groundwater potentiometric surface map for March 2022 is presented in **Figure 3**. Using an estimated effective porosity value of 17% and estimated average hydraulic conductivity value of 4.71 ft/day, the average rate of groundwater flow for the uppermost aquifer beneath the Unit was calculated to be 19.26 ft/year.

Well 1	Well 2	h^1 (ft)	h^2 (ft)	S (ft)	i	K (ft/day)	n_e	Vs (ft/day)	Vs (ft/yr.)
GW-06R	MW-FGD-19D	4.49	3.45	1,085	0.0010	4.71	0.17	0.0266	9.69
MW-FGD-17	GW-02R	4.21	3.45	295	0.0026			0.0714	26.05
MW-FGD-17	GW-01R	4.21	3.36	390	0.0022			0.0604	22.04
1) Hydraulic conductivity and effective porosity values from February 2021: Analysis of Groundwater Flow Rate and Direction – FGD Pond Wells (Nautilus 2021).						Average		0.0528	19.26

2.3.2 Second Semiannual 2022 Detection Monitoring Program

The groundwater potentiometric surface map for September 2022 is presented in **Figure 4**. Using an estimated effective porosity value of 17% and estimated average hydraulic conductivity value of 4.71 ft/day, the average rate of groundwater flow for the uppermost aquifer beneath the Unit was calculated to be 24.71 ft/year.

Well 1	Well 2	h^1 (ft)	h^2 (ft)	S (ft)	i	K (ft/day)	n_e	Vs (ft/day)	Vs (ft/yr.)
GW-06R	MW-FGD-19D	4.99	3.46	1,085	0.0014	4.71	0.17	0.0391	14.26
MW-FGD-17	GW-02R	4.45	3.46	295	0.0034			0.0930	33.94
MW-FGD-17	GW-01R	4.45	3.45	390	0.0026			0.0710	25.93
1) Hydraulic conductivity and effective porosity values from February 2021: Analysis of Groundwater Flow Rate and Direction – FGD Pond Wells (Nautilus 2021).						Average		0.0677	24.71

Section 3
Field Activities

CCR-related groundwater sampling activities that occurred during 2022 are summarized in the following sections.

3.1 Compliance Monitoring Program Sampling Activities

As per 40 CFR §257.94(c), two semiannual DMP sampling events were completed for the constituents and parameters listed in Appendix III of the CCR Rule. Summaries of the 2022 DMP sampling events are presented below.

2022 Monitoring Event	Sample Dates	Final Laboratory Package Receipt Date
1st Semiannual Detection Monitoring Program Event	March 21-23, 2022	April 4, 2022
2nd Semiannual Detection Monitoring Program Event	September 19-21, 2022	October 5, 2022

During each of the DMP sampling events, the compliance monitoring wells were sampled in accordance with the Station's Groundwater Monitoring Program (GWMP).

Samples collected during the semiannual sampling events were submitted to GEL Laboratories (GEL) in Charleston, South Carolina under proper chain-of-custody procedures. GEL is a SCDHEC Environmental Laboratory Certification Program (ELCP) accredited laboratory for analysis of CCR Rule constituents (GEL certification #10120001).

Section 4
Laboratory Analytical Results

Laboratory analytical results from the DMP sampling events conducted in 2022 are summarized in the following sections.

4.1 First Semiannual 2022 Detection Monitoring Program Event

The groundwater samples collected during the first semiannual DMP event were analyzed by GEL for the constituents and parameters listed in Appendix III of the CCR Rule. The laboratory certificates of analysis, chain-of-custody forms, and field notes for the sampling event are presented in **Appendix B**. A summary of the CCR sampling data for the Unit is included in **Table 2**.

4.2 Second Semiannual 2022 Detection Monitoring Program Event

The groundwater samples collected during the second semiannual DMP event were analyzed by GEL for the constituents and parameters listed in Appendix III of the CCR Rule. The laboratory certificates of analysis, chain-of-custody forms, and field notes for the sampling event are presented in **Appendix C**. A summary of the CCR sampling data for the Unit is included in **Table 3**.

Section 5
Data Quality Validation

Third-party data validation services were provided by Environmental Standards, Inc. for the DMP sampling events. The reviews were performed with guidance from the US EPA data validation guidelines and in accordance with the Station's GWMP. A discussion of the findings is presented below.

5.1 First Semiannual 2022 Compliance Event Findings

The following field QA/QC samples for this event included:

- One blind duplicate sample was collected from the MW-FGD-19 location on March 23, 2022.
- Additional sample volume was collected at MW-FGD-18 on March 23, 2022, to allow for the laboratory to conduct a matrix spike (MS) and matrix spike duplicate (MSD) quality control check.
- A field blank was collected in the area of MW-FGD-19D on March 23, 2022, using laboratory provided deionized water. The field blank was used to assess for potential contaminants from field conditions during sampling activities.

These QA/QC samples were analyzed for the same constituents as the groundwater samples. Based on review of the laboratory-provided QC data and Environmental Standards recommendations, the data for this sampling event were determined to meet the data quality objectives for the project. A copy of the data validation report is included in **Appendix B**.

5.2 Second Semiannual 2022 Compliance Event Findings

The following field QA/QC samples for this event included:

- One blind duplicate sample was collected from the MW-FGD-18 location on September 19, 2022.
- Additional sample volume was collected at MW-FGD-16 on September 20, 2022, to allow for the laboratory to conduct a MS/MSD quality control check.
- A field blank was collected in the area of MW-FGD-19 on September 19, 2022, using laboratory provided deionized water. The field blank was used to assess for potential contaminants from field conditions during sampling activities.
- A field blank was collected in the area of MW-FGD-21 on September 21, 2022, using laboratory provided deionized water. The field blank was used to assess for potential contaminants from field conditions during sampling activities.

These QA/QC samples were analyzed for the same constituents as the groundwater samples. Based on review of the laboratory-provided QC data and Environmental Standards recommendations, the data for this sampling event were determined to meet the data quality objectives for the project. A copy of the data validation report is included in **Appendix C**.

Section 6
Statistical Evaluation of Groundwater Data

Statistical evaluation of the semiannual DMP data was performed in accordance with the statistical method certified by a qualified South Carolina-registered professional engineer. The certified statistical method has been posted to the Unit's operating record. Statistical evaluations completed in 2022 are summarized in the following sections.

6.1 Site-Specific Background Evaluations

Compliance data from each semiannual event was evaluated against site-specific background values as follows.

6.1.1 First Semiannual 2022 Compliance Event

Pursuant to 40 CFR §257.94, TRC evaluated Appendix III constituent detections against site-specific background values that were established for the DMP (**Appendix D**). Based on that evaluation, the following Appendix III SSIs were identified for the first semiannual 2022 event (**Table 2**):

- Boron (MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR)
- Calcium (MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR)
- Chloride (MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR)
- Fluoride (MW-FGD-19D)
- pH (MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR)
- Sulfate (MW-FGD-17, MW-FGD-18, and MW-FGD-20AR)
- TDS (MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR)

An ASD and certification were prepared for this SSI and is attached as **Appendix A**.

6.1.2 Second Semiannual 2022 Compliance Event

Pursuant to 40 CFR §257.94, TRC evaluated Appendix III constituent detections against site-specific background values that were established for the DMP (**Appendix E**). Based on that evaluation, the following Appendix III SSIs were identified for the second semiannual 2022 event (**Table 3**):

- Boron (MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR)
- Calcium (MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR)

- Chloride (MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR)
- pH (MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR)
- Sulfate (MW-FGD-18)
- TDS (MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR)

An ASD evaluation of the data from the second semiannual 2022 compliance event will be performed during the first quarter of 2023 per 40 CFR §257.94(e)(2).

Section 7
Conclusions

7.1 Findings

The first semiannual 2022 DMP compliance sampling event was conducted on March 21-23, 2022, with sample analyses completed on April 4, 2022. The second semiannual 2022 DMP compliance sampling event was conducted on September 19-21, 2022, with sample analyses completed on October 5, 2022. These groundwater sampling and analysis activities were performed in general accordance with the requirements of the Unit's GWMP for the CCR Rule network.

Evaluation of the monitoring results from the first semiannual 2022 event identified exceedances above the background value for boron, calcium, chloride, fluoride, pH, sulfate, and TDS. DESC completed a successful ASD for the potential SSI identified during the first semiannual 2022 detection monitoring event. The ASD was certified by a South Carolina-registered professional engineer and presented in this Report. Monitoring results from the second semiannual 2022 event identified exceedances above the background value for boron, calcium, chloride, pH, sulfate, and TDS. An ASD evaluation is being conducted in accordance with the applicable CCR Rule timeframe.

7.2 Planned Activities

Planned activities for the program during 2023 are listed below:

- An ASD evaluation of the data from the second semiannual 2022 compliance event will be performed during the first quarter of 2023.
- Install observation wells in the vicinity of the Unit to further refine hydrogeologic conditions.
- Conduct semiannual detection monitoring as planned for March and September 2023.

Section 8
References

Civil & Environmental Consultants, Inc. (CEC) 2021. Closure By Removal Certification, Williams Station FGD Pond, Goose Creek, South Carolina: May 2021.

Environmental Protection Agency (EPA). 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. *40 CFR Parts 257and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule.* [EPA-HQ-RCRA–2009–0640; FRL–9919–44–OSWER]. RIN–2050–AE81.

EPA. 2016. Federal Register. Volume 81. No. 151. Friday August 5, 2016. Part II. Environmental Protection Agency. *40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule.* [EPA-HQ-OLEM–2016–0274; FRL–9949–44–OLEM].

Garrett and Moore 2017. Groundwater Monitoring System Certification, Williams Station FGD Pond, Berkeley County, South Carolina: Garrett & Moore, Inc.

Nautilus 2016. Groundwater Sampling and Analysis Plan, Williams Station FGD Pond. Berkeley County, South Carolina: Nautilus Geologic Consulting, PLLC.

Nautilus 2021. Analysis of Groundwater Flow Rate and Direction: September 2020 Monitoring Data, Cope Station: Class III Landfill, Wateree Station: Class III Landfill, FGD Pond, Ash Pond, Williams Station: FGD Pond, Highway 52 Class III Landfill: Nautilus Geologic Consulting, PLLC. February 2021.

Section 9
Signature Page

This *2022 CCR Annual Groundwater Monitoring and Corrective Action Report* (Report) has been prepared by a qualified groundwater scientist on behalf of Dominion Energy South Carolina (DESC) for the Williams Generating Station New FGD Pond. This Report satisfied the reporting requirements specified in Title 40 CFR §257.90(e) *et seq.* [Disposal of Coal Combustion Residuals (CCR) from Electric Utilities (CCR Rule; Federal Register Vol. 80, No. 74, 21302-21501 on April 17, 2015, as amended)].

Name: Richard A. Mayer Jr., P.G. **Expiration Date:** June 30, 2023

Company: TRC Environmental Corporation **Date:** January 31, 2023

(SEAL)

Tables

Table 1
Summary of Historical CCR Static Water Level Data
Dominion Energy South Carolina - Williams Station New FGD Pond
Goose Creek, Berkeley County, South Carolina

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
MW-FGD-16	12.70	4/28/2021	9.11	3.59
		5/18/2021	9.21	3.49
		6/9/2021	8.53	4.17
		6/30/2021	8.65	4.05
		7/21/2021	8.40	4.30
		8/10/2021	8.43	4.27
		9/2/2021	7.03	5.67
		9/23/2021	7.61	5.09
		3/21/2022	9.11	3.59
		9/19/2022	8.37	4.33
MW-FGD-17	11.98	4/28/2021	7.56	4.42
		5/18/2021	7.61	4.37
		6/9/2021	7.44	4.54
		6/30/2021	7.40	4.58
		7/21/2021	7.45	4.53
		8/10/2021	7.22	4.76
		9/2/2021	7.55	4.43
		9/23/2021	7.05	4.93
		3/21/2022	7.77	4.21
		9/19/2022	7.53	4.45
MW-FGD-18	11.64	4/28/2021	9.48	2.16
		5/18/2021	8.31	3.33
		6/9/2021	9.41	2.23
		6/30/2021	7.75	3.89
		7/21/2021	9.64	2.00
		8/10/2021	8.95	2.69
		9/2/2021	8.23	3.41
		9/23/2021	7.90	3.74
		3/21/2022	9.30	2.34
		9/19/2022	8.51	3.13
MW-FGD-19	12.49	4/28/2021	9.17	3.32
		5/18/2021	9.54	2.95
		6/9/2021	9.89	2.60
		6/30/2021	10.39	2.10
		7/21/2021	11.69	0.80
		8/10/2021	11.62	0.87
		9/2/2021	12.19	0.30
		9/23/2021	11.73	0.76
		3/21/2022	10.70	1.79
		9/19/2022	8.37	4.12
MW-FGD-19D	12.56	4/28/2021	8.82	3.74
		5/18/2021	9.31	3.25
		6/9/2021	9.01	3.55
		6/30/2021	9.10	3.46
		7/21/2021	9.12	3.44
		8/10/2021	8.95	3.61
		9/2/2021	8.92	3.64
		9/23/2021	8.45	4.11
		3/21/2022	9.11	3.45
		9/19/2022	9.10	3.46

Notes:
1) ft AMSL = feet above mean sea level.

Table 1
Summary of Historical CCR Static Water Level Data
Dominion Energy South Carolina - Williams Station New FGD Pond
Goose Creek, Berkeley County, South Carolina

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
MW-FGD-20AR	9.39	4/28/2021	5.75	3.64
		5/18/2021	6.21	3.18
		6/9/2021	6.12	3.27
		6/30/2021	6.10	3.29
		7/21/2021	6.15	3.24
		8/10/2021	5.87	3.52
		9/2/2021	6.19	3.20
		9/23/2021	5.78	3.61
		3/21/2022	6.09	3.30
		9/19/2022	6.07	3.32
MW-FGD-21	13.80	4/28/2021	10.75	3.05
		5/18/2021	10.46	3.34
		6/9/2021	9.44	4.36
		6/30/2021	9.66	4.14
		7/21/2021	9.41	4.39
		8/10/2021	9.62	4.18
		9/2/2021	9.82	3.98
		9/23/2021	8.46	5.34
		3/21/2022	10.07	3.73
		9/19/2022	9.39	4.41
GW-1R	13.97	5/18/2021	10.84	3.13
		6/9/2021	10.60	3.37
		6/30/2021	10.60	3.37
		7/21/2021	10.60	3.37
		8/10/2021	10.13	3.84
		9/2/2021	10.67	3.30
		9/23/2021	10.29	3.68
		3/21/2022	10.61	3.36
		9/19/2022	10.52	3.45
GW-2R	14.71	5/18/2021	11.50	3.21
		6/9/2021	11.31	3.40
		6/30/2021	11.28	3.43
		7/21/2021	11.34	3.37
		8/10/2021	10.82	3.89
		9/2/2021	11.34	3.37
		9/23/2021	11.38	3.33
		3/21/2022	11.26	3.45
		9/19/2022	11.25	3.46
GW-4A	14.58	5/18/2021	10.58	4.00
		6/9/2021	10.21	4.37
		6/30/2021	10.27	4.31
		7/21/2021	10.15	4.43
		8/10/2021	10.04	4.54
		9/2/2021	10.35	4.23
		9/23/2021	10.41	4.17
		3/21/2022	10.69	3.89
		9/19/2022	10.11	4.47

Notes:
1) ft AMSL = feet above mean sea level.

Table 1
Summary of Historical CCR Static Water Level Data
Dominion Energy South Carolina - Williams Station New FGD Pond
Goose Creek, Berkeley County, South Carolina

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
GW-6R	15.08	5/18/2021	10.59	4.49
		6/9/2021	10.21	4.87
		6/30/2021	10.28	4.80
		7/21/2021	10.22	4.86
		8/10/2021	10.03	5.05
		9/2/2021	10.40	4.68
		9/23/2021	10.55	4.53
		3/21/2022	10.59	4.49
		9/19/2022	10.09	4.99
GW-7R	15.52	5/18/2021	12.86	2.66
		6/9/2021	11.65	3.87
		6/30/2021	11.94	3.58
		7/21/2021	11.45	4.07
		8/10/2021	11.64	3.88
		9/2/2021	11.93	3.59
		9/23/2021	12.01	3.51
		3/21/2022	12.17	3.35
		9/19/2022	11.50	4.02
GW-8	15.20	5/18/2021	11.57	3.63
		6/9/2021	11.25	3.95
		6/30/2021	11.34	3.86
		7/21/2021	11.33	3.87
		8/10/2021	11.15	4.05
		9/2/2021	11.52	3.68
		9/23/2021	11.39	3.81
		3/21/2022	11.54	3.66
		9/19/2022	11.45	3.75

Notes:
1) ft AMSL = feet above mean sea level.

Table 2
Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station New FGD Pond
Goose Creek, Berkeley County, South Carolina

			Background Wells								Downgradient Wells							
		Sample ID:	MW-FGD-16				MW-FGD-21				MW-FGD-17				MW-FGD-18			
		Sample Date:	03/22/2022				03/22/2022				03/22/2022				03/23/2022			
Parameter Name	**Units**	**Background Threshold Values**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**
CCR Appendix III																		
Boron	µg/L	66.7	**39.0**		4.00	15.0	**22.9**		4.00	15.0	**1250**		40.0	150	**7240**		200	750
Calcium	µg/L	41700	**12800**		30.0	100	**45200**		30.0	100	**216000**		300	1000	**421000**		600	2000
Chloride	mg/L	33.3	**29.9**		0.335	1.00	**3.26**		0.0670	0.200	**323**		3.35	10.0	**1950**		26.8	80.0
Fluoride	mg/L	0.646	**0.300**		0.0330	0.100	**0.0767**	J	0.0330	0.100	**0.423**		0.0330	0.100	**0.537**		0.0330	0.100
pH	SU	4.67 - 5.82	5.01		0.1	0.1	5.72		0.1	0.1	6.16		0.1	0.1	6.44		0.1	0.1
Sulfate	mg/L	89.2	**41**		0.665	2.00	**94.2**		1.33	4.00	**92.6**		6.65	20.0	**169**		53.2	160
Total Dissolved Solids	mg/L	329	**199**		3.40	14.3	**236**		3.40	14.3	**1250**		3.40	14.3	**3850**		3.40	14.3
Field Parameters																		
Conductivity	µS/cm	--	260.22		0.1	0.1	406.03		0.1	0.1	1945.7		0.1	0.1	6826.3		0.1	0.1
Dissolved Oxygen	mg/L	--	0.92		0.01	0.01	0.25		0.01	0.01	0.41		0.01	0.01	0.05		0.01	0.01
Temperature	C	--	20.76		0.01	0.01	19.62		0.01	0.01	23.34		0.01	0.01	23.16		0.01	0.01
Turbidity	NTU	--	2.04		0.1	0.1	10.82		0.1	0.1	5.09		0.1	0.1	2.31		0.1	0.1
Depth to Water	ft btoc	--	9.11		0.01	0.01	10.07		0.01	0.01	7.77		0.01	0.01	9.30		0.01	0.01
Groundwater Elevation	ft msl	--	3.59		0.01	0.01	3.73		0.01	0.01	4.21		0.01	0.01	2.34		0.01	0.01
Oxidation Reduction Potential	millivolts	--	239.3		0.1	0.1	3.0		0.1	0.1	-65.0		0.1	0.1	-70.3		0.1	0.1

Notes:
MDL = Method Detection Limit
QL = Quantitation Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
µS/cm = MicroSiemen per centimeter
SU = Standard Units
C = Degrees Celsius
NTU = Nephelometric Turbidity Unit
ft btoc = feet below top of casing
ft msl = feet above mean sea level

Qualifiers (Qual)
J = Estimated Results

Bold font = Detected constituent
* - Groundwater Elevation data collected on March 21, 2022

= Concentration greater than Background Threshold Values

Table 2
Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station New FGD Pond
Goose Creek, Berkeley County, South Carolina

			Downgradient Wells															
		Sample ID:	MW-FGD-19				MW-FGD-19 Duplicate				MW-FGD-19D				MW-FGD-20AR			
		Sample Date:	03/23/2022				03/23/2022				03/23/2022				03/22/2022			
Parameter Name	**Units**	**Background Threshold Values**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**
CCR Appendix III																		
Boron	µg/L	66.7	**194**		20.0	75.0	**193**		20.0	75.0	**1340**		40.0	150	**3430**		80.0	300
Calcium	µg/L	41700	**132000**		150	500	**140000**		150	500	**105000**		300	1000	**266000**		600	2000
Chloride	mg/L	33.3	**755**		13.4	40.0	**818**		6.70	20.0	**570**		6.70	20.0	**601**		6.70	20.0
Fluoride	mg/L	0.646	**0.120**		0.0330	0.100	**0.170**		0.0330	0.100	**0.659**		0.0330	0.100	**0.256**		0.0330	0.100
pH	SU	4.67 - 5.82	5.60		0.1	0.1	5.60		0.1	0.1	6.62		0.1	0.1	6.47		0.1	0.1
Sulfate	mg/L	89.2	**35.6**		1.33	4.00	**37.0**		1.33	4.00	**19.2**		1.33	4.00	**178**		13.3	40.0
Total Dissolved Solids	mg/L	329	**1870**		3.40	14.3	**2010**		3.40	14.3	**1270**		3.40	14.3	**1700**		3.40	14.3
Field Parameters																		
Conductivity	µS/cm	--	3083.9		0.1	0.1	3083.9		0.1	0.1	2298.2		0.1	0.1	2685.7		0.1	0.1
Dissolved Oxygen	mg/L	--	0.11		0.01	0.01	0.11		0.01	0.01	0.15		0.01	0.01	0.11		0.01	0.01
Temperature	C	--	22.18		0.01	0.01	22.18		0.01	0.01	23.11		0.01	0.01	22.27		0.01	0.01
Turbidity	NTU	--	1.93		0.1	0.1	1.93		0.1	0.1	11.00		0.1	0.1	3.20		0.1	0.1
Depth to Water	ft btoc	--	10.70		0.01	0.01	10.70		0.01	0.01	9.11		0.01	0.01	6.09		0.01	0.01
Groundwater Elevation	ft msl	--	1.79		0.01	0.01	1.79		0.01	0.01	3.45		0.01	0.01	3.30		0.01	0.01
Oxidation Reduction Potential	millivolts	--	-3.8		0.1	0.1	-3.8		0.1	0.1	-68.8		0.1	0.1	-35.3		0.1	0.1

Notes:

MDL = Method Detection Limit

QL = Quantitation Limit

mg/L = Milligram per liter

µg/L = Microgram per liter

µS/cm = MicroSiemen per centimeter

SU = Standard Units

C = Degrees Celsius

NTU = Nephelometric Turbidity Unit

ft btoc = feet below top of casing

ft msl = feet above mean sea level

Bold font = Detected constituent

* - Groundwater Elevation data collected on March 21, 2022

= Concentration greater than Background Threshold Values

Table 3
Summary of Second Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station New FGD Pond
Goose Creek, Berkeley County, South Carolina

			Background Wells								Downgradient Wells							
		Sample ID:	MW-FGD-16				MW-FGD-21				MW-FGD-17				MW-FGD-18			
		Sample Date:	09/20/2022				09/21/2022				09/19/2022				09/19/2022			
Parameter Name	**Units**	**Background Threshold Values**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**
CCR Appendix III																		
Boron	µg/L	66.7	**51.4**		4.00	15.0	**32.8**		4.00	15.0	**256**		20.0	75.0	**6980**		200	750
Calcium	µg/L	41700	**15100**		30.0	100	**45400**		30.0	100	**151000**		150	500	**391000**		1500	5000
Chloride	mg/L	33.3	**24.5**		0.335	1.00	**3.01**		0.0670	0.200	**148**		1.68	5.00	**1750**		26.8	80.0
Fluoride	mg/L	0.646	**0.330**		0.0330	0.100	**0.0470**	J	0.0330	0.100	**0.511**		0.0330	0.100	**0.420**		0.0330	0.100
pH	SU	4.67 - 5.82	4.80		0.1	0.1	5.32		0.1	0.1	6.18		0.1	0.1	6.11		0.1	0.1
Sulfate	mg/L	89.2	**48.9**		0.665	2.00	**84.8**		1.33	4.00	**15.9**		0.133	0.400	**175**		53.2	160
Total Dissolved Solids	mg/L	329	**193**		2.38	10.0	**243**		2.38	10.0	**948**		2.38	10.0	**3720**		2.38	10.0
Field Parameters																		
Conductivity	µS/cm	--	293.07		0.1	0.1	453.15		0.1	0.1	1596		0.1	0.1	6687		0.1	0.1
Dissolved Oxygen	mg/L	--	0.98		0.01	0.01	0.40		0.01	0.01	0.18		0.01	0.01	0.20		0.01	0.01
Temperature	C	--	25.48		0.01	0.01	24.17		0.01	0.01	25.68		0.01	0.01	25.11		0.01	0.01
Turbidity	NTU	--	3.26		0.1	0.1	3.91		0.1	0.1	3.49		0.1	0.1	3.25		0.1	0.1
Depth to Water	ft btoc	--	8.37		0.01	0.01	9.39		0.01	0.01	7.53		0.01	0.01	8.51		0.01	0.01
Groundwater Elevation	ft msl	--	4.33		0.01	0.01	4.41		0.01	0.01	4.45		0.01	0.01	3.13		0.01	0.01
Oxidation Reduction Potential	millivolts	--	104.1		0.1	0.1	45.5		0.1	0.1	-18.0		0.1	0.1	-76.7		0.1	0.1

Notes:
MDL = Method Detection Limit
QL = Quantitation Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
µS/cm = MicroSiemen per centimeter
SU = Standard Units
C = Degrees Celsius
NTU = Nephelometric Turbidity Unit
ft btoc = feet below top of casing
ft msl = feet above mean sea level

Qualifiers (Qual)
J = Estimated Results

Bold font = Detected constituent
* - Groundwater Elevation data collected on September 19, 2022

= Concentration greater than Background Threshold Values

Table 3
Summary of Second Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station New FGD Pond
Goose Creek, Berkeley County, South Carolina

			Downgradient Wells															
		Sample ID:	MW-FGD-18 Duplicate				MW-FGD-19				MW-FGD-19D				MW-FGD-20AR			
		Sample Date:	09/19/2022				09/19/2022				09/19/2022				09/20/2022			
Parameter Name	**Units**	**Background Threshold Values**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**
CCR Appendix III																		
Boron	µg/L	66.7	**6930**		200	750	**172**		20.0	75.0	**1610**		40.0	150	**1710**		40.0	150
Calcium	µg/L	41700	**391000**		1500	5000	**163000**		150	500	**112000**		300	1000	**172000**		300	1000
Chloride	mg/L	33.3	**1800**		26.8	80.0	**704**		6.70	20.0	**600**		6.70	20.0	**383**		6.70	20.0
Fluoride	mg/L	0.646	**0.411**		0.0330	0.100	**0.0963**	J	0.0330	0.100	**0.640**		0.0330	0.100	**0.184**		0.0330	0.100
pH	SU	4.67 - 5.82	6.11		0.1	0.1	5.47		0.1	0.1	6.85		0.1	0.1	6.49		0.1	0.10
Sulfate	mg/L	89.2	**177**		53.2	160	**58.2**		13.3	40.000	**26.4**		0.665	2.00	**10.5**		0.133	0.400
Total Dissolved Solids	mg/L	329	**3790**		2.38	10.0	**1550**		2.38	10.0	**1320**		2.38	10.0	**1270**		2.38	10.0
Field Parameters																		
Conductivity	µS/cm	--	6687		0.1	0.1	3449.9		0.1	0.1	2894.7		0.1	0.1	3380.3		0.1	0.1
Dissolved Oxygen	mg/L	--	0.20		0.01	0.01	0.15		0.01	0.01	0.16		0.01	0.01	0.12		0.01	0.01
Temperature	C	--	25.01		0.01	0.01	26.03		0.01	0.01	25.55		0.01	0.01	27.67		0.01	0.01
Turbidity	NTU	--	3.25		0.1	0.1	2.08		0.1	0.1	1.88		0.1	0.1	1.87		0.1	0.1
Depth to Water	ft btoc	--	8.51		0.01	0.01	8.37		0.01	0.01	9.10		0.01	0.01	6.07		0.01	0.01
Groundwater Elevation	ft msl	--	3.13		0.01	0.01	4.12		0.01	0.01	3.46		0.01	0.01	3.32		0.01	0.01
Oxidation Reduction Potential	millivolts	--	-76.7		0.1	0.1	-6.8		0.1	0.1	-127.3		0.1	0.1	-43.8		0.1	0.1

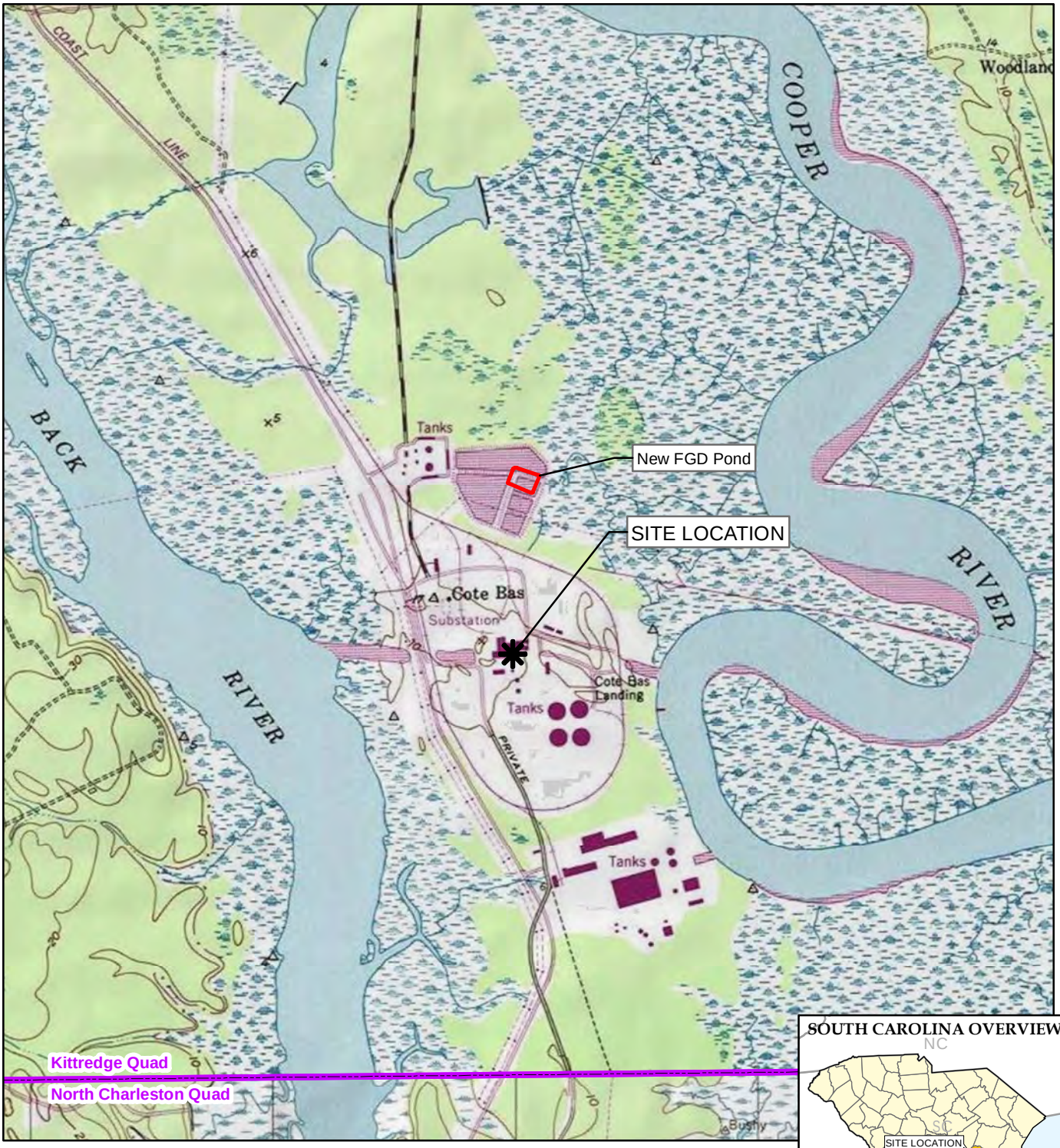
Notes:
MDL = Method Detection Limit
QL = Quantitation Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
µS/cm = MicroSiemen per centimeter
SU = Standard Units
C = Degrees Celsius
NTU = Nephelometric Turbidity Unit
ft btoc = feet below top of casing
ft msl = feet above mean sea level

Qualifiers (Qual)
J = Estimated Results

Bold font = Detected constituent
* - Groundwater Elevation data collected on September 19, 2022
= Concentration greater than Background Threshold Values

Figures

TRC - GIS



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES (KITTREDGE & NORTH CHARLESTON).

N

SITE LOCATION

USGS 24k QUAD BOUNDARY

NEW FGD POND BOUNDARY

1 " = 2,000 '
1:24,000

0 1,000 2,000
FEET

TRC
50 International Drive, Suite 150
Patewood Plaza Three
Greenville, SC 29615
Phone: 864.281.0030

DOMINION ENERGY SOUTH CAROLINA
WILLIAMS STATION
2242 BUSHY PARK ROAD
GOOSE CREEK, SOUTH CAROLINA 29445

FIGURE 1
SITE LOCATION MAP

DRAWN BY:	J. YONTS
APPROVED BY:	R. MAYER
PROJECT NO:	416559.0006.0000
FILE NO.	Figure1_Site_Location_Map_CCR.mxd
DATE:	JANUARY 2023

LEGEND

- CCR Background Monitoring Well
- CCR Downgradient Monitoring Well
- New FGD Pond Boundary

N
W E
S

0 200 400 Feet

1 " = 200 '
1:2,400

NOTE: Aerial Image from ESRI World Imagery dated March 2022.

PROJECT:
DESC WILLIAMS STATION
NEW FGD POND
GOOSE CREEK, SOUTH CAROLINA

TITLE:
CCR RULE COMPLIANCE
MONITORING WELL NETWORK

DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL		
APPROVED BY:	R. MAYER		**FIGURE 2**
DATE:	JANUARY 2023		

TRC
50 International Drive, Suite 150
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Greenville, SC 29615
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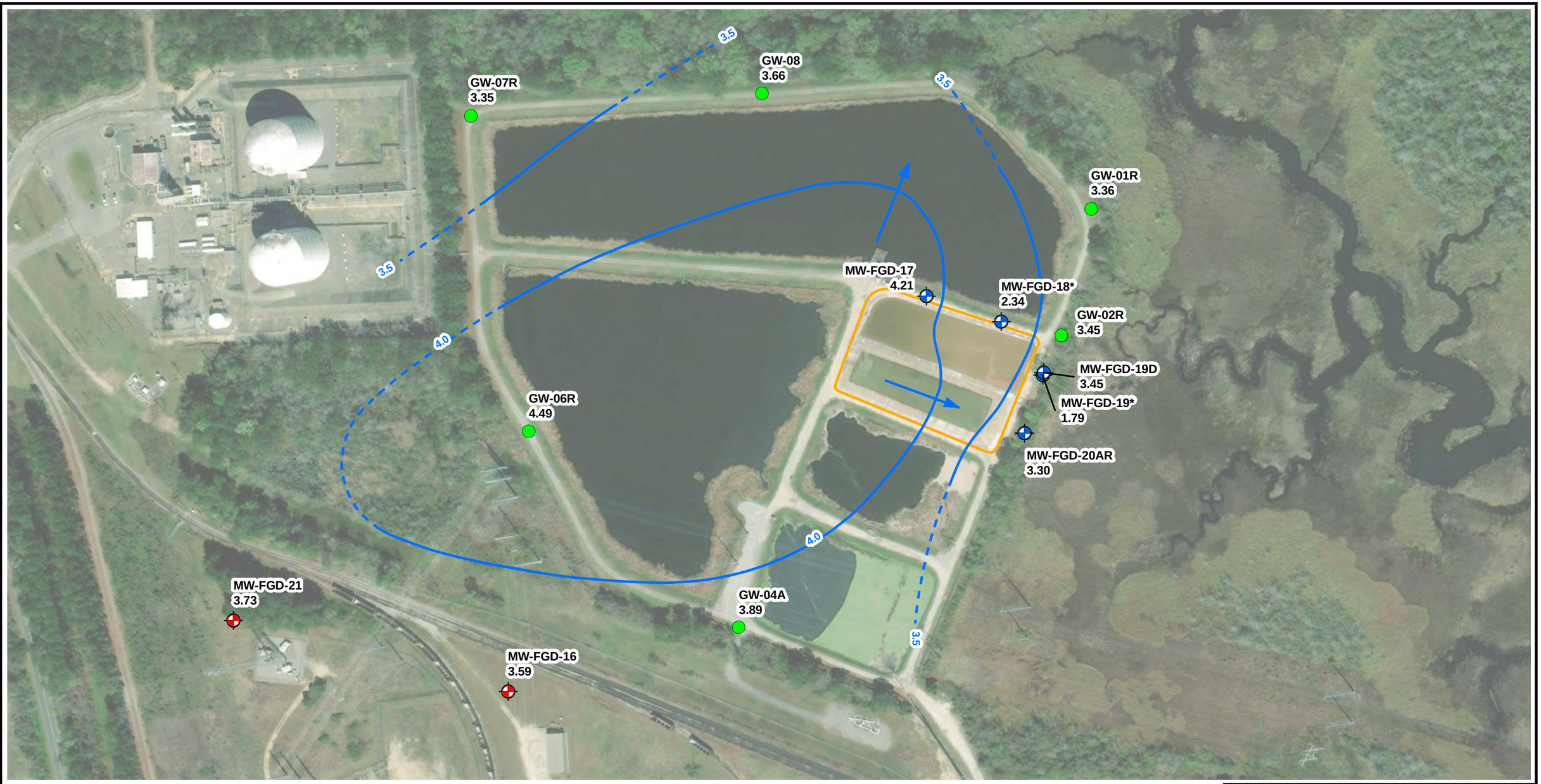
www.TRCcompanies.com

FILE NO.: Figure2_Williams_Station_FGD_CCR_Well_Network.mxd



LEGEND

- CCR Background Monitoring Well
- CCR Downgradient Monitoring Well
- Event Piezometer
- New FGD Pond Boundary
- Water Table Elevation in feet above mean sea level (0.5' Contour Intervals) - Dashed where inferred.
- **3.89** Water Elevation (FT MSL)
- Approximate Groundwater Flow Direction

NOTE:
1) Aerial Image from ESRI World Imagery dated March 2022.
2) *Water level not used for contouring

N W E S

0 200 400 Feet

1 " = 200 '
1:2,400

PROJECT:
DESC WILLIAMS STATION
NEW FGD POND
GOOSE CREEK, SOUTH CAROLINA

TITLE:
GROUNDWATER POTENTIOMETRIC SURFACE MAP - MARCH 22, 2022

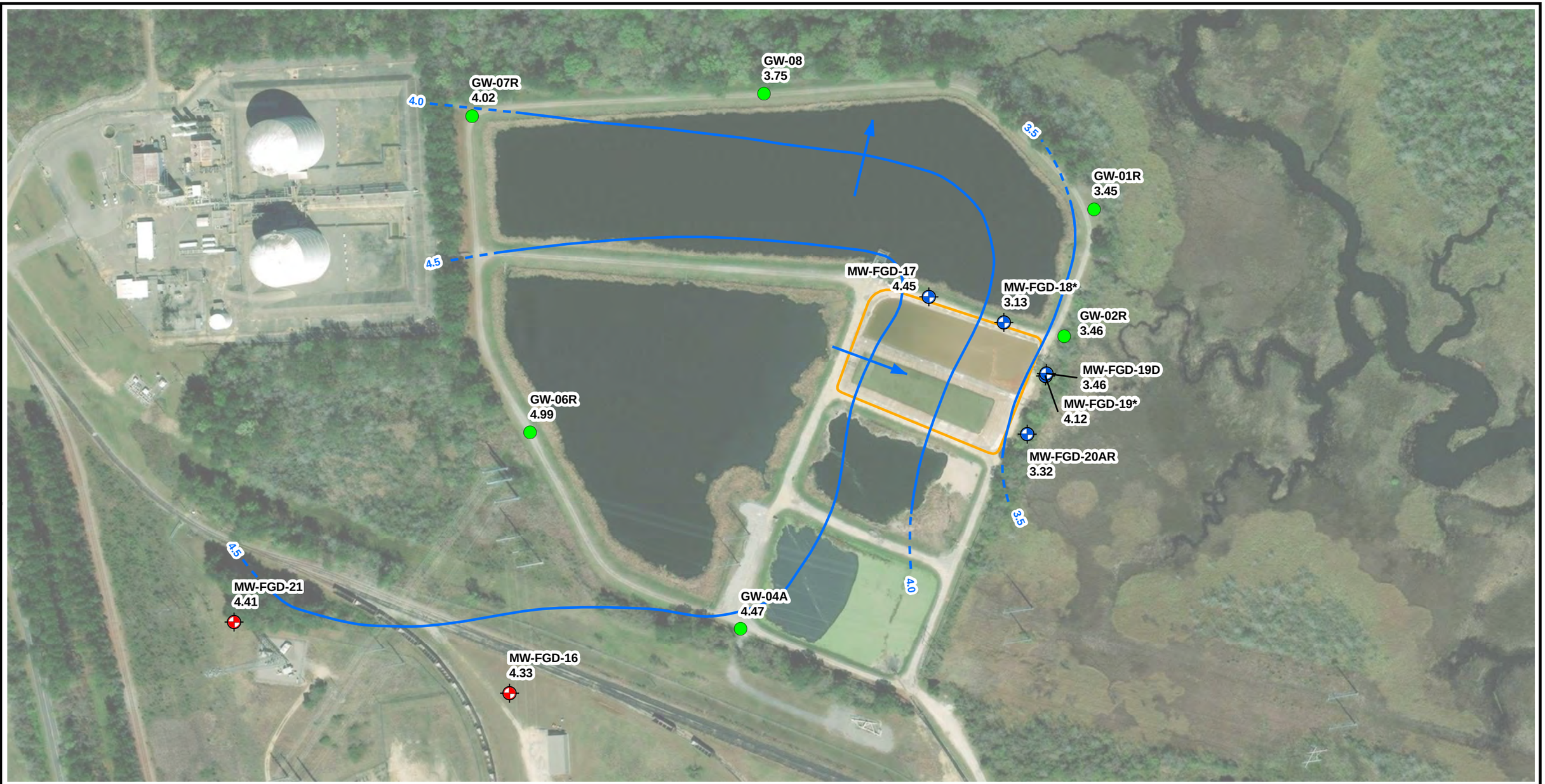
DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	J. BRADLEY		
APPROVED BY:	R. MAYER		**FIGURE 3**
DATE:	JANUARY 2023		

TRC
50 International Drive, Suite 150
Patewood Plaza Three
Greenville, SC 29615
Phone: 864.281.0030
www.TRCcompanies.com

FILE NO.: Figure3_Williams_FGD_CCR_WT_2022Q1.mxd

Plot Date: 1/31/2023, 11:06:35 AM by JYONTS -- LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\Dominion\South Carolina\6 Williams SC\Williams Station\2022\Figure3_Williams_FGD_CCR_WT_2022Q1.mxd
Coordinate System: NAD 1983 StatePlane South Carolina FIPS 3900 Feet (Foot US) Map Rotation: 0

TRC - GIS



LEGEND

- CCR Background Monitoring Well
- CCR Downgradient Monitoring Well
- Event Piezometer
- New FGD Pond Boundary
- Water Table Elevation in feet above mean sea level (0.5' Contour Intervals) - Dashed where inferred.
- **4.33** Water Elevation (FT MSL)
- Approximate Groundwater Flow Direction

NOTE:
1) Aerial Image from ESRI World Imagery dated March 2022.
2) *Water level not used for contouring

N W E S

0 200 400 Feet

1 " = 200 '
1:2,400

PROJECT:
DESC WILLIAMS STATION
NEW FGD POND
GOOSE CREEK, SOUTH CAROLINA

TITLE:
GROUNDWATER POTENTIOMETRIC SURFACE MAP - SEPTEMBER 19, 2022

DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	J. BRADLEY		
APPROVED BY:	R. MAYER		**FIGURE 4**
DATE:	JANUARY 2023		

TRC
50 International Drive, Suite 150
Patewood Plaza Three
Greenville, SC 29615
Phone: 864.281.0030
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FILE NO.: Figure4_Williams_FGD_CCR_WT_2022Q3.mxd

Plot Date: 1/31/2023, 11:06:25 AM by JYONTS -- LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\Dominion\South Carolina\6 Williams SC\Williams Station\2022\Figure4 Williams FGD CCR WT 2022Q3.mxd
Coordinate System: NAD 1983 StatePlane South Carolina FIPS 3900 Feet (Foot US)
Map Rotation: 0
TRC - GIS

Appendix A
March 2022 Alternate Source Demonstration

DOMINION ENERGY SOUTH CAROLINA

WILLIAMS STATION NEW FGD POND

BERKELEY COUNTY, SOUTH CAROLINA

EPA CCR RULE COMPLIANCE

ALTERNATE SOURCE DEMONSTRATION REPORT

First Semiannual 2022 Detection Monitoring Event

September 2022

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Senior Engineer

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Executive Summary

Dominion Energy South Carolina (DESC) completed the most recent semiannual detection monitoring sampling (first semiannual 2022 sampling event) in March 2022 for the Williams Generating Station (Station) Flue Gas Desulfurization (FGD) Wastewater Pond (New FGD Pond) (Unit) pursuant to the *Criteria for Classification of Solid Waste Disposal Facilities and Practices; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*, 40 CFR Part 257 (CCR Rule). The Unit constitutes a coal combustion residuals (CCR) Unit per the CCR Rule. Per 40 CFR §257.94, the samples were analyzed for the Appendix III detection monitoring parameters. Upon receipt of the laboratory analytical results, statistical analysis was performed and evaluated for potential statistically significant increases (SSI) above background concentrations.

The following SSIs above background concentrations were identified based on direct comparisons made between the statistically derived background threshold values (95 percent upper prediction limit) and the downgradient monitoring results:

- MW-FGD-17: boron, calcium, chloride, pH, sulfate, and total dissolved solids (TDS)
- MW-FGD-18: boron, calcium, chloride, pH, sulfate, and TDS
- MW-FGD-19: boron, calcium, chloride, and TDS
- MW-FGD-19D: boron, calcium, chloride, fluoride, pH, and TDS
- MW-FGD-20AR: boron, calcium, chloride, pH, sulfate, and TDS

The information provided in this report serves as DESC's Alternate Source Demonstration (ASD) prepared in accordance with 40 CFR §257.94(e)(2) and successfully demonstrates that the SSIs are not due to a release from the Unit to groundwater, but are due to the following:

- Improper well screen placement for MW-FGD-19;
- A potential source located upgradient from the Unit; and/or
- Natural variation in groundwater quality within the area.

The Unit, constructed and installed within the boundaries of the original FGD Pond, opened in April 2021 in accordance with the CCR Rule requirements. The original FGD Pond was closed in April 2021 by removal of CCR in accordance with §257.102(c) and the Closure Plan – Amendment 1 (Closure Plan), dated February 2021 (CEC 2021). The removed CCR was transported offsite for disposal at the Williams Station Highway 52 Landfill for disposal. A Closure by Removal Certificate was prepared by Civil & Environmental Consultants, Inc. and dated May 2021.

Therefore, based on the closure and presence of an existing CCR unit and information provided in this ASD report, DESC will continue to conduct semiannual detection monitoring for Appendix III constituents in accordance with 40 CFR §257.94 at the certified groundwater monitoring well system (Certified Monitoring Well Network) for the Unit.

Section 1
Introduction

1.1 Background

Dominion Energy South Carolina (DESC) operates a Flue Gas Desulfurization (FGD) Wastewater Pond (FGD Pond) (Unit) for the management of coal combustion residuals (CCR) at the Williams Generating Station (Station). The Unit is located at 2242 Bushy Park Road, Goose Creek, Berkley County, South Carolina as shown on **Figure 1**.

The Unit, installed within the boundaries of the original FGD Pond, opened in May 2021 in accordance with the CCR Rule requirements. The Unit is comprised of two 700,000-gallon forebays constructed with a composite liner system comprised of, from bottom to top: an 18-inch thick compacted clay soil liner; 60-mil textured HDPE geomembrane liner; 28-ounce per square yard geotextile cushion; and 6-inch thick fabric formed concrete protection layer (CEC 2021a).

The Unit receives wet FGD blowdown from the FGD system. The FGD blowdown contains residual gypsum solids that are discharged from the secondary hydrocyclone overflows and pumped to the Unit. Each forebay within the Unit allows for solids to settle and provide temporary storage until dewatered, removed, and disposed offsite in the Williams Stations Highway 52 Class III Landfill.

The Unit is considered an existing surface impoundment that contains CCR for disposal in accordance with the federal *Criteria for Classification of Solid Waste Disposal Facilities and Practices; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule* (CCR Rule), effective October 19, 2015, and subsequent Final Rules promulgated by the United States Environmental Protection Agency (USEPA).

1.2 Groundwater Monitoring and Statistical Analysis

In accordance with 40 CFR §257.90 through §257.94, DESC installed a groundwater monitoring system for the Unit and has collected samples from the Certified Monitoring Well Network for laboratory analysis for CCR constituents and performed statistical analysis of the collected samples. DESC installed a Certified Monitoring Well Network for the Unit in accordance with 40 CFR §257.90 and §257.91. The location of the EPA CCR Rule Compliance Monitoring Well Network is presented on **Figure 2**. The Certified Monitoring Well Network consists of 6 wells installed into the subsurface to monitor shallow groundwater as follows:

- Two wells were installed as background monitoring wells and include MW-FGD-16 and MW-FGD-21.

- Five wells were installed as compliance monitoring wells and include MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR.
- Additionally, monitoring wells GW-01R, GW-02R, GW-04A, GW-06R, GW-07R, and GW-08 are used to support ASD evaluations as necessary.

Pursuant to 40 CFR §257.91(f), DESC obtained certification by a qualified South Carolina-registered professional engineer (P.E.) stating that the Certified Monitoring Well Network has been designed and constructed to meet the requirements of 40 CFR §257.91 of the CCR Rule (CEC 2021b).

As discussed above, the Unit is currently being monitored pursuant to the CCR Rule. A groundwater sampling and analysis plan including selection of statistical procedures to evaluate groundwater data was prepared per the CCR Rule (Nautilus 2016). Eight independent baseline/detection monitoring background sample events were performed from April 2021 through September 2021 in accordance with 40 CFR §257.93(d) and §257.94(b). The eight baseline/detection monitoring background samples were analyzed for Appendix III to Part 257 – Constituents for Detection Monitoring and for Appendix IV to Part 257 – Constituents for Assessment Monitoring.

Following completion of background detection monitoring in September 2021, DESC implemented semiannual detection monitoring per 40 CFR §257.94(b) for the Unit. The first semiannual (initial) detection monitoring event was performed in March 2022. Per the CCR Rule, the semiannual detection monitoring event samples were analyzed for Appendix III constituents.

After completion of the semiannual detection monitoring event, the Appendix III laboratory analytical data were statistically evaluated to identify potential statistically significant increases (SSIs) for Appendix III constituents above background levels. In accordance with 40 CFR §257.93(f)(6), DESC obtained certification by a qualified South Carolina-registered P.E. stating that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR Unit (CEC 2021c).

Pursuant to 40 CFR §257.93(h), statistical analysis of the laboratory analytical data was performed to identify potential SSIs for the first semiannual 2022 detection monitoring event. Data from the first semiannual 2022 detection monitoring event is presented in **Table 1**. A total of 28 SSIs were identified for seven Appendix III constituents: boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS).

1.3 Purpose

Pursuant to 40 CFR §257.94(e)(2), DESC may demonstrate that a source other than the Unit caused the SSIs identified or that the SSIs resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The purpose of this report is to provide written documentation of the

successful ASD for the SSIs identified for the first semiannual 2022 detection monitoring event, pursuant to 40 CFR §257.94(e)(2) of the CCR Rule.

1.4 Site Hydrogeology

The Station is located in the outer Coastal Plain of South Carolina. The uppermost aquifer in the Coastal Plain of South Carolina is the unconfined surficial aquifer. In most areas, the surficial aquifer consists of discontinuous layers of sand, clay and locally occurring beds of shell and limestone.

The Unit is located within the Ashley-Cooper River Subbasin (Ashley-Combahee-Edisto (ACE) Basin watershed) of the Coastal Plain physiographic province. Aquifers and confining units in the South Carolina portion of the Coastal Plain are composed of crystalline carbonate rocks, sand, clay, silt, and gravel that contain large volumes of high-quality groundwater (SAWSC 2016). The Unit groundwater monitoring wells are within the surficial aquifer of the Cooper geologic formation. The Cooper formation (or Cooper Marl) underlies most of the area south of the Santee River. According to *State of South Carolina Resources Commission Report Number 139* (1985), the Cooper formation is approximately 130 feet thick beneath the site. This unit functions as a confining layer beneath the overlying surficial aquifer. At least three of the hydrogeologic logs for wells installed around the Unit identify the top of Cooper Marl at depths of 19.5 to 28 feet below ground surface, making the surficial aquifer beneath the Unit less than 20 feet in thickness. Groundwater flow beneath the Unit is generally to the east as depicted on **Figure 3**. Hydraulic conductivity values in the surficial aquifer at the Unit range from 4.47×10^{-5} cm/s to 1.08×10^{-2} cm/s with an estimated groundwater flow velocities of between 0.002 to 2.85 feet/day (Nautilus 2021).

1.5 General Groundwater Quality

Regionally, groundwater quality in the Ashley-Cooper River Subbasin consists of a sodium bicarbonate water type grading to a sodium chloride water type with depth and proximity to the coast (SCDNR 2009). The USEPA has established National Primary Drinking Water Regulations that define a permitted maximum contaminant level (MCL) for specific constituents in drinking water. The primary MCLs are legally enforceable standards that were established to protect public health by limiting the levels of contaminants in drinking water. Additionally, the USEPA has established non-enforceable secondary MCLs for guidelines to assist public water systems in managing their drinking water for aesthetic consideration such as taste, color, and odor. Reported water quality concentrations for select secondary drinking water contaminants compared to USEPA secondary MCLs are provided in the table below.

Ashley-Cooper River Subbasin Groundwater Water Quality

Constituent	Concentration Range		USEPA MCL
	Low	High	
Fluoride (mg/L)	0.1	5.0	4.0 (Primary)
pH (s.u.)	4.8	7.2	6.5 – 8.5 (Secondary)
Sulfate (mg/L)	1.0	1,000	250 (Secondary)

Note: mg/L = milligram per liter, s.u. = standard units

As noted in the table above, the natural range of groundwater quality within the Ashley-Cooper River Subbasin exceeds the primary drinking water MCL for fluoride and the secondary drinking water MCLs for pH and sulfate (SCDNR 2009).

Section 2
Alternate Source Demonstration

Pursuant to 40 CFR §257.94(e)(2), DESC may demonstrate that a source other than the Unit caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. As discussed previously, the first semiannual 2022 detection monitoring event was performed in March 2022. Statistical analysis of the first semiannual 2022 detection monitoring data was performed pursuant to 40 CFR §257.93(f) and (g) and in accordance with the Statistical Methods Certification (SCE&G 2017) and the Statistical Analysis Plan. Based on either increasing trends at 95% confidence levels using Thiel-Sen's trend test and/or interwell prediction limits statistical analyses, the following SSIs were identified:

- MW-FGD-17: boron, calcium, chloride, pH, sulfate, and TDS
- MW-FGD-18: boron, calcium, chloride, pH, sulfate, and TDS
- MW-FGD-19: boron, calcium, chloride, and TDS
- MW-FGD-19D: boron, calcium, chloride, fluoride, pH, and TDS
- MW-FGD-20AR: boron, calcium, chloride, pH, sulfate, and TDS

All other Appendix III constituent concentrations were within their trends at 95% confidence levels using Thiel-Sen's trend and/or interwell prediction limits in all the CCR Rule groundwater monitoring system wells.

A discussion for each of the individual SSIs and associated evidence demonstrating that the SSIs were not caused by a release from the Unit is provided in the subsections below.

2.1 Improper Well Screen Placement for MW-FGD-19

The boron, calcium, chloride, and TDS SSIs identified at MW-FGD-19 are the result of an improperly set monitoring well screen interval. The following evidence supports this determination

- During review of the CCR monitoring well network for the New FGD Pond, it was discovered that the screened interval for MW-FGD-19 was improperly set to intercept fill material close to the surface. Review of the soil boring log for the well indicated that fill material was noted from the ground surface to a depth of 7.5 feet below ground surface (bgs). The top of the sand filter pack was set at 6 feet bgs with the well screen interval set approximately 8 to 18 feet bgs.
- The New FGD Pond is tidally influenced and the potential for surface water and groundwater interaction within the fill material is likely at times. As such, MW-FGD-19 does not monitor groundwater flowing from beneath the Unit.

- Monitoring well MW-FGD-19D was installed with the surface seal and filter pack/screened interval set below the fill material and is more appropriate for monitoring groundwater in the MW-FGD-19 area.

2.2 Boron at MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR

The boron SSIs identified at MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR are the result of a potential source upgradient from the Unit. The following evidence supports this determination:

- Boron was detected at concentrations greater than the background threshold value of 66.7 µg/L in MW-FGD-17 (1,250 µg/L), MW-FGD-18 (7,240 µg/L), MW-FGD-19D (1,340 µg/L), and MW-FGD-20AR (3,430 µg/L) during the March 2022 sampling event. Based on review of potentiometric surface mapping (**Figure 3**), the locations of MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR are hydraulically downgradient from Pond D. Monitoring wells that are part of the NPDES program were sampled in May 2022 for boron concentrations in support of the ASD evaluation. The boron concentration detected in upgradient monitoring well GW-04A as depicted on **Figure 4** was 20,100 µg/L suggesting that a potential source of boron upgradient from the Unit may exist.

2.3 Calcium at MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR

The calcium SSIs identified at MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR are the result of a potential source upgradient from the Unit. The following evidence supports this determination:

- Calcium was detected at concentrations greater than the background threshold value of 41.7 mg/L in MW-FGD-17 (216 mg/L), MW-FGD-18 (421 mg/L), MW-FGD-19D (105 mg/L), and MW-FGD-20AR (266 mg/L) during the March 2022 sampling event. Based on review of potentiometric surface mapping (**Figure 3**), the locations of MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR are hydraulically downgradient from Pond D. Monitoring wells that are part of the NPDES program were sampled in May 2022 for calcium concentrations in support of the ASD evaluation. The calcium concentrations detected in upgradient monitoring wells GW-04A (1,290 mg/L) and GW-06R (491 mg/L) as depicted on **Figure 5** suggests that a potential source of calcium upgradient from the Unit may exist.

2.4 Chloride at MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR

The chloride SSIs identified at MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR are the result of a potential source upgradient from the Unit. The following evidence supports this determination:

- Chloride was detected at concentrations greater than the background threshold value of 33.3 mg/L in MW-FGD-17 (323 mg/L), MW-FGD-18 (1,950 mg/L), MW-FGD-19D (570 mg/L), and MW-FGD-20AR (601 mg/L) during the March 2022 sampling event. Based on review of potentiometric surface mapping (**Figure 3**), the locations of MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR are hydraulically downgradient from Pond D. Monitoring wells that are part of the NPDES program were sampled in May 2022 for chloride concentrations in support of the ASD evaluation. The chloride concentration detected in upgradient monitoring well GW-04A as depicted on **Figure 6** was 2,820 mg/L suggesting that a potential source of chloride upgradient from the Unit may exist.

2.5 Fluoride at MW-FGD-19D

The fluoride SSI identified at MW-FGD-19D is the result of natural variation in groundwater quality from areas upgradient from the Unit and/or a potential upgradient source. The following evidence supports this determination:

- Fluoride was detected at a concentration greater than the background threshold value of 0.646 mg/L at MW-FGD-19D at 0.659 mg/L during the March 2022 sampling event. Reported regional fluoride concentrations for the groundwater in the Unit area range between 0.1 mg/L to 5.0 mg/L (SCDNR 2009). The detected fluoride concentration for MW-FGD-19D is within the range of natural variation in area groundwater quality.
- Based on review of potentiometric surface mapping (**Figure 3**), the location of MW-FGD-19D is hydraulically downgradient from Pond D. Monitoring wells that are part of the NPDES program were sampled in May 2022 for fluoride concentrations in support of the ASD evaluation. The fluoride concentration detected in upgradient monitoring well GW-04A was 304 mg/L suggesting that a potential source of fluoride upgradient from the Unit may exist.

2.6 pH at MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR

The pH SSIs identified at MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR are the result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this:

- The pH levels were detected at levels greater than the background threshold range for pH of 4.67 to 5.82 at MW-FGD-17 (6.16), MW-FGD-18 (6.44), MW-FGD-19D (6.62), and MW-FGD-20AR (6.47) during the March 2022 sampling event. Reported regional pH levels for groundwater in the Unit area range between 4.8 and 7.2 (SCDNR 2009). The pH levels within MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR from March 2022 all fall within the range of natural variation in area groundwater quality.

2.7 Sulfate at MW-17, MW-FGD-18, and MW-FGD-20AR

The sulfate SSIs identified at MW-FGD-17, MW-FGD-18, and MW-FGD-20AR are the result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Sulfate was detected at concentrations greater than the background threshold value of 89.2 mg/L at MW-FGD-17 (92.6 mg/L), MW-FGD-18 (169 mg/L), and MW-FGD-20AR (178 mg/L) during the March 2022 sampling event. Reported regional sulfate concentrations for the groundwater in the Unit area range between 1 mg/L to 1,000 mg/L (SCDNR 2009). The detected sulfate concentrations for MW-FGD-17, MW-FGD-18, and MW-FGD-20AR fall within the range of natural variation in are groundwater quality.
- The sulfate concentration in background well MW-FGD-21 was detected above the background threshold value of 89.2 mg/L at a concentration of 94.2 mg/L. This observation further suggests that the sulfate SSIs for MW-FGD-17, MW-FGD-18, and MW-FGD-20AR are the result of natural variation in groundwater quality from upgradient areas.

2.8 Total Dissolved Solids MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR

The TDS SSIs identified at MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR are the result of a potential source upgradient from the Unit. The following evidence supports this determination:

- TDS was detected at concentrations greater than the background threshold value of 329 mg/L in MW-FGD-17 (1,250 mg/L), MW-FGD-18 (3,850 mg/L), MW-FGD-19D (1,270 mg/L), and MW-FGD-20AR (1,700 mg/L) during the March 2022 sampling event. Based on review of potentiometric surface mapping (**Figure 3**), the locations of MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20AR are hydraulically downgradient from Pond D. Monitoring wells that are part of the NPDES program were sampled in May 2022 for TDS concentrations in support of the ASD evaluation. The TDS concentrations detected in upgradient monitoring wells GW-04A (4,990 mg/L) and GW-06R (4,340 mg/L) as depicted on **Figure 7** suggests that a potential source of TDS upgradient from the Unit may exist.

Section 3
Conclusions

The information provided in this report serves as the ASD prepared in accordance with 40 CFR §257.94(e)(2) of the CCR Rule and demonstrates that the SSIs determined based on statistical analysis of the first semiannual 2022 detection monitoring event performed in March of 2022 was not due to a release from the CCR Unit to the subsurface.

Based on the information provided in this ASD report, DESC will continue to conduct semiannual detection monitoring in accordance with 40 CFR §257.94 at the Certified Monitoring Well Network for the CCR Unit.

Section 4
Certification

I hereby certify that the alternative source demonstration presented within this document for the DESC Williams New FGD Pond CCR Unit has been prepared to meet the requirements of Title 40 CFR §257.94(e)2 of the Federal CCR Rule. This document is accurate and has been prepared in accordance with good engineering practices, including the consideration of applicable industry standards, and with the requirements of Title 40 CFR §257.94(e) 2.

Name: Nakia W. Addison, P.E.

Expiration Date: June 30, 2024

Company: TRC Engineers, Inc.

Date: September 30, 2022

(SEAL)

Section 5
References

CEC 2021a. Closure Plan, Williams Station New FGD Pond, Goose Creek, South Carolina: Civil & Environmental Consultants, Inc.

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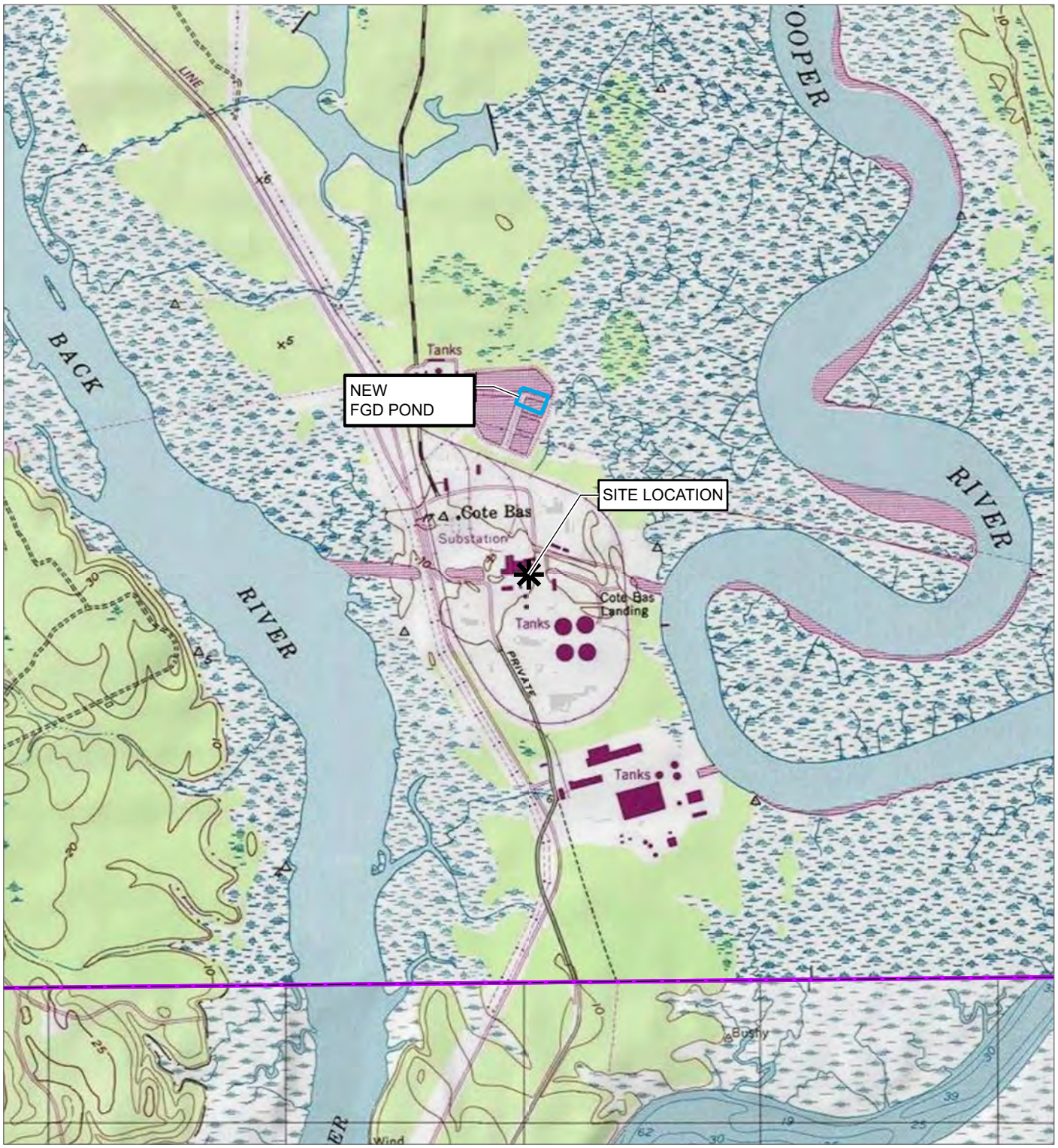
Figures



- SITE LOCATION
- NEW FGD POND
- COUNTY BOUNDARY
- USGS 24K QUAD BOUNDARY

BASE MAP: USGS TOPO MAP
DATA SOURCES: TRC, USGS 7.5' QUADRANGLES:
KITTREDGE (1979) QUAD ID: 33079-A8, SC; NORTH
CHARLESTON (1959) QUAD ID: 32079-H8, SC

0 1,000 2,000 FEET

1:24,000 1" = 2,000'

PROJECT: **DOMINION ENERGY SOUTH CAROLINA**
WILLIAMS STATION
2242 BUSHY PARK ROAD,
GOOSE CREEK, SC 29445

TITLE:

SITE LOCATION MAP

DRAWN BY:	R. BARBER	PROJ. NO.:	416559.0006.0000
CHECKED BY:	A. HORRIE		
APPROVED BY:	R. MAYER		**FIGURE 1**
DATE:	SEPTEMBER 2022		

708 HEARTLAND TRAIL
SUITE 3000
MADISON, WI 53717
PHONE: 608.826.3600

FILE: DOMINION_VARIOUS

LEGEND

- Monitoring Well
- New FGD Pond

N
W E
S

0 200 400 Feet

1 " = 200 '
1:2,400

NOTE: Aerial Image from ESRI World Imagery dated March 2022.

PROJECT:
DESC WILLIAMS STATION
NEW FGD POND
GOOSE CREEK, SOUTH CAROLINA

TITLE:
CCR RULE COMPLIANCE
MONITORING WELL NETWORK

DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL		
APPROVED BY:	R. MAYER		**FIGURE 2**
DATE:	SEPTEMBER 2022		

TRC
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FILE NO.: Figure2_Williams_Station_FGD_CCR_Well_Network.mxd

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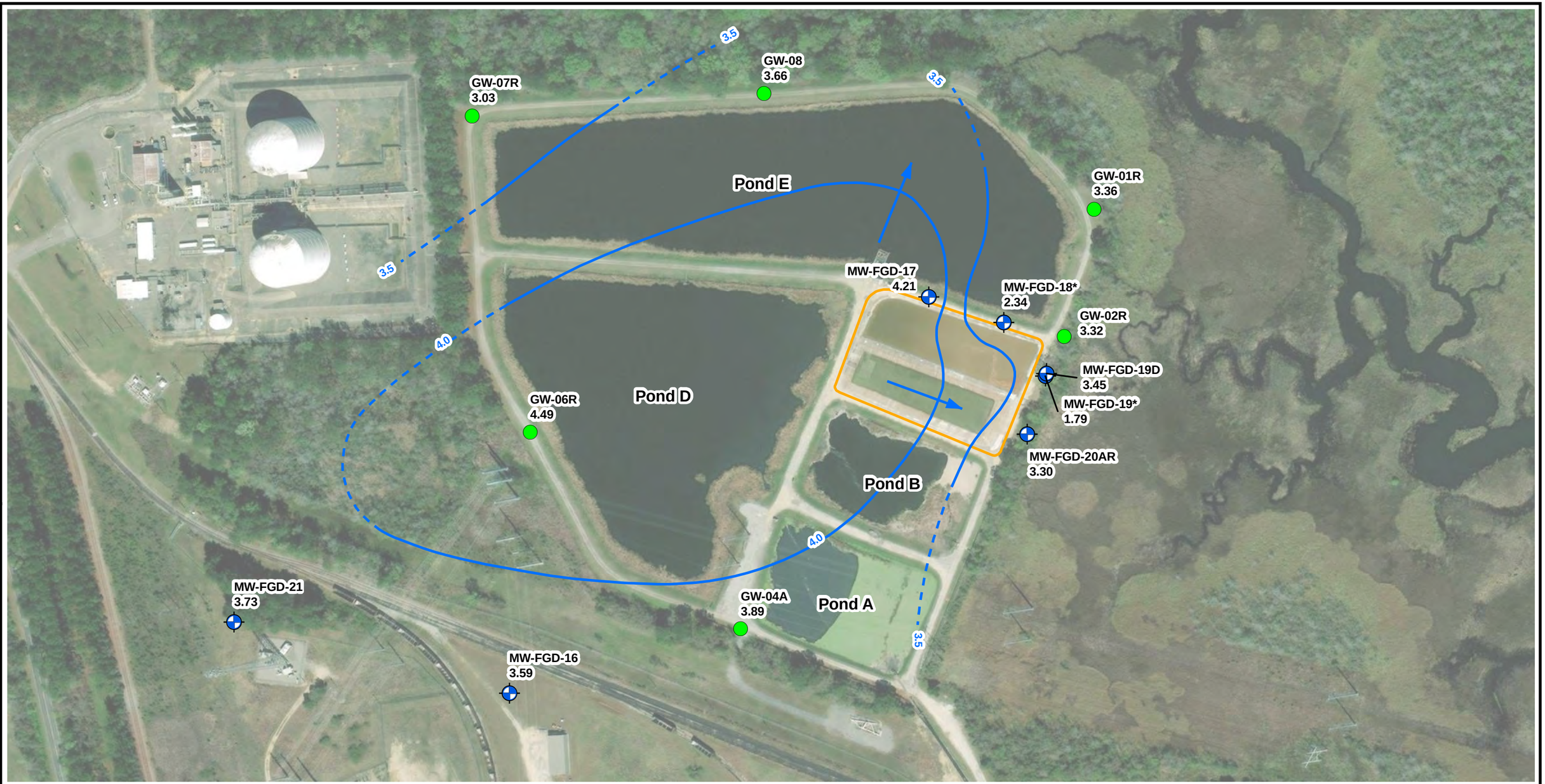
Map Rotation: 0

TRC - GIS



LEGEND

- Monitoring Well
- Event Piezometer
- New FGD Pond
- Water Table Elevation in feet above mean sea level (0.5' Contour Intervals) - Dashed where inferred.
- **3.89** Water Elevation (FT MSL)
- Approximate Groundwater Flow Direction

NOTE:
1) Aerial Image from ESRI World Imagery dated March 2022.
2) *Water level not used for contouring

N W E S

0 200 400 Feet

1 " = 200 '
1:2,400

PROJECT:
DESC WILLIAMS STATION
NEW FGD POND
GOOSE CREEK, SOUTH CAROLINA

TITLE:
GROUNDWATER POTENTIOMETRIC SURFACE MAP - MARCH 22, 2022

DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	J. BRADLEY		
APPROVED BY:	R. MAYER		**FIGURE 3**
DATE:	SEPTEMBER 2022		

TRC
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Greenville, SC 29615
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FILE NO.: Figure3_Williams_FGD_CCR_WT_2022Q1.mxd

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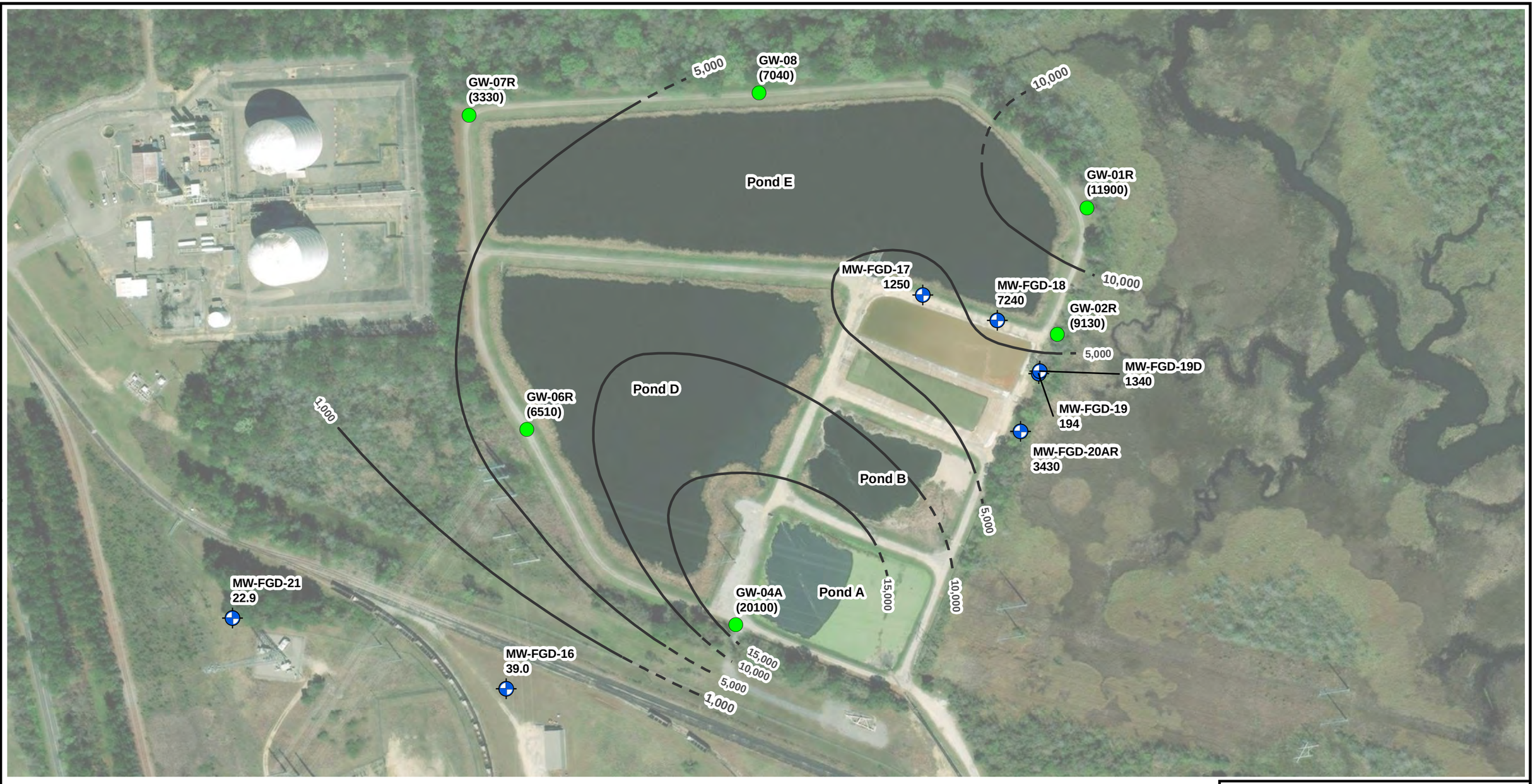
Coordinate System: NAD 1983 StatePlane South Carolina FIPS 3900 Feet (Foot US) Map Rotation: 0
TRC - GIS



LEGEND

- Monitoring Well
- Other Program Monitoring Well
- New FGD Pond
- Approximate Boron Isoconcentration Line
  Dashed where Inferred; µg/L

N
W E
S

0 200 400 Feet

1 " = 200 '
1:2,400

Note:
1) Aerial Image from ESRI World Imagery dated March 2022.
2) Background threshold value for Boron = 66.7 µg/L.
3) Concentrations in parentheses collected in May 2022 during ASD evaluation and are used as reference values.

PROJECT:
DESC WILLIAMS STATION
NEW FGD POND
GOOSE CREEK, SOUTH CAROLINA

TITLE:
BORON ISOCONCENTRATION MAP
MARCH 23 & 23, 2022

DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	J. BRADLEY		
APPROVED BY:	R. MAYER		**FIGURE 4**
DATE:	SEPTEMBER 2022		

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FILE NO.: Figure4_Williams_FGD_CCR_Boron_2022Q1.mxd

Plot Date: 9/23/2022, 10:28:52 AM by JYONTS -- LAYOUT: ANSI B(11"x17")
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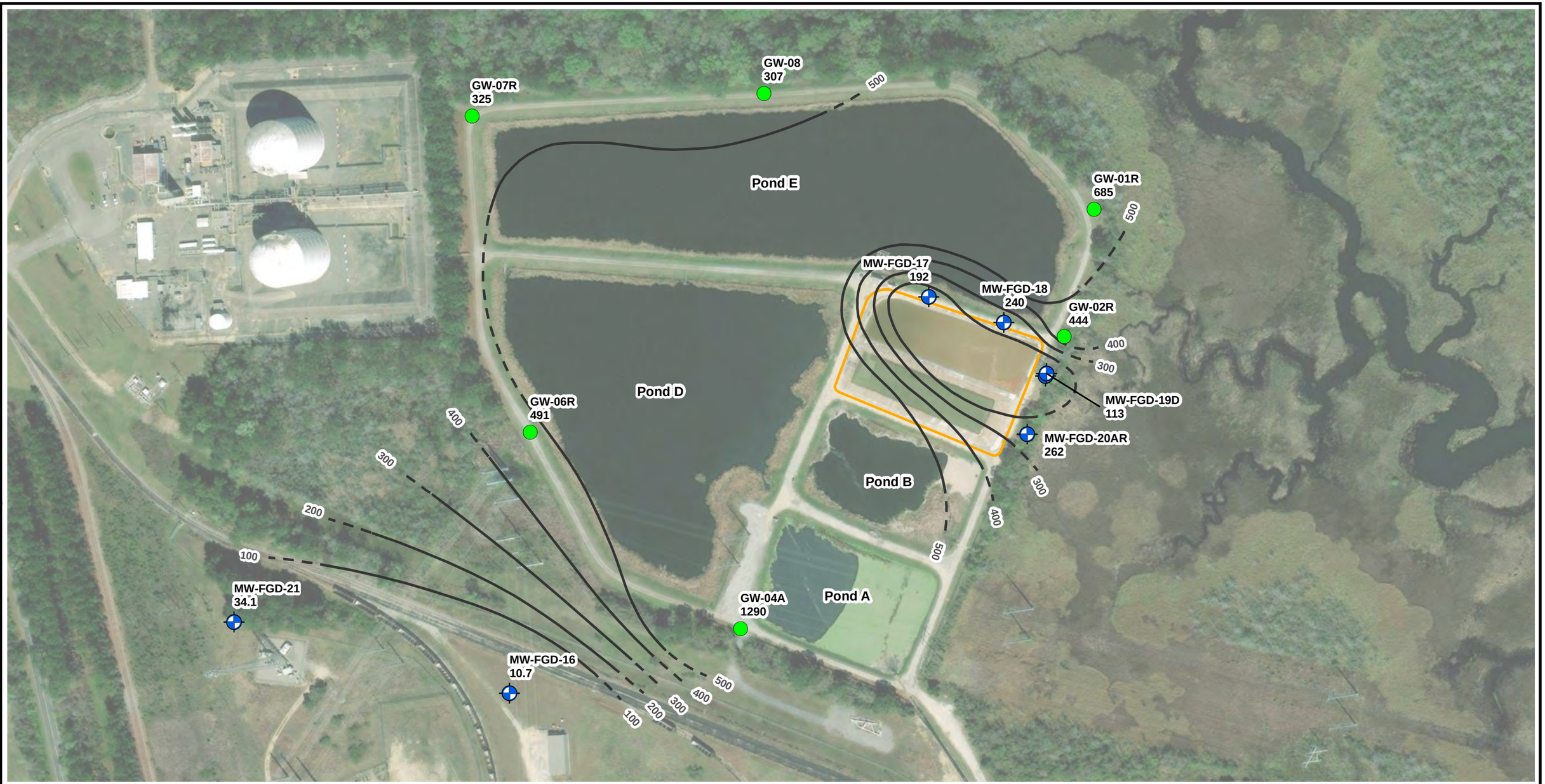
Coordinate System: NAD 1983 StatePlane South Carolina FIPS 3900 Feet (Foot US)
Map Rotation: 0
TRC - GIS



LEGEND

- Monitoring Well
- Other Program Monitoring Well
- New FGD Pond
- Approximate Calcium Isoconcentration Line Dashed where Inferred; mg/L

N W E S

Note:
1) Aerial Image from ESRI World Imagery dated March 2022.
2) Background threshold value for Calcium = 41.7 mg/L.

0 200 400 Feet

1 " = 200 '
1:2,400

PROJECT:
DESC WILLIAMS STATION
NEW FGD POND
GOOSE CREEK, SOUTH CAROLINA

TITLE:
CALCIUM ISOCONCENTRATION MAP
MAY 25 & 26, 2022

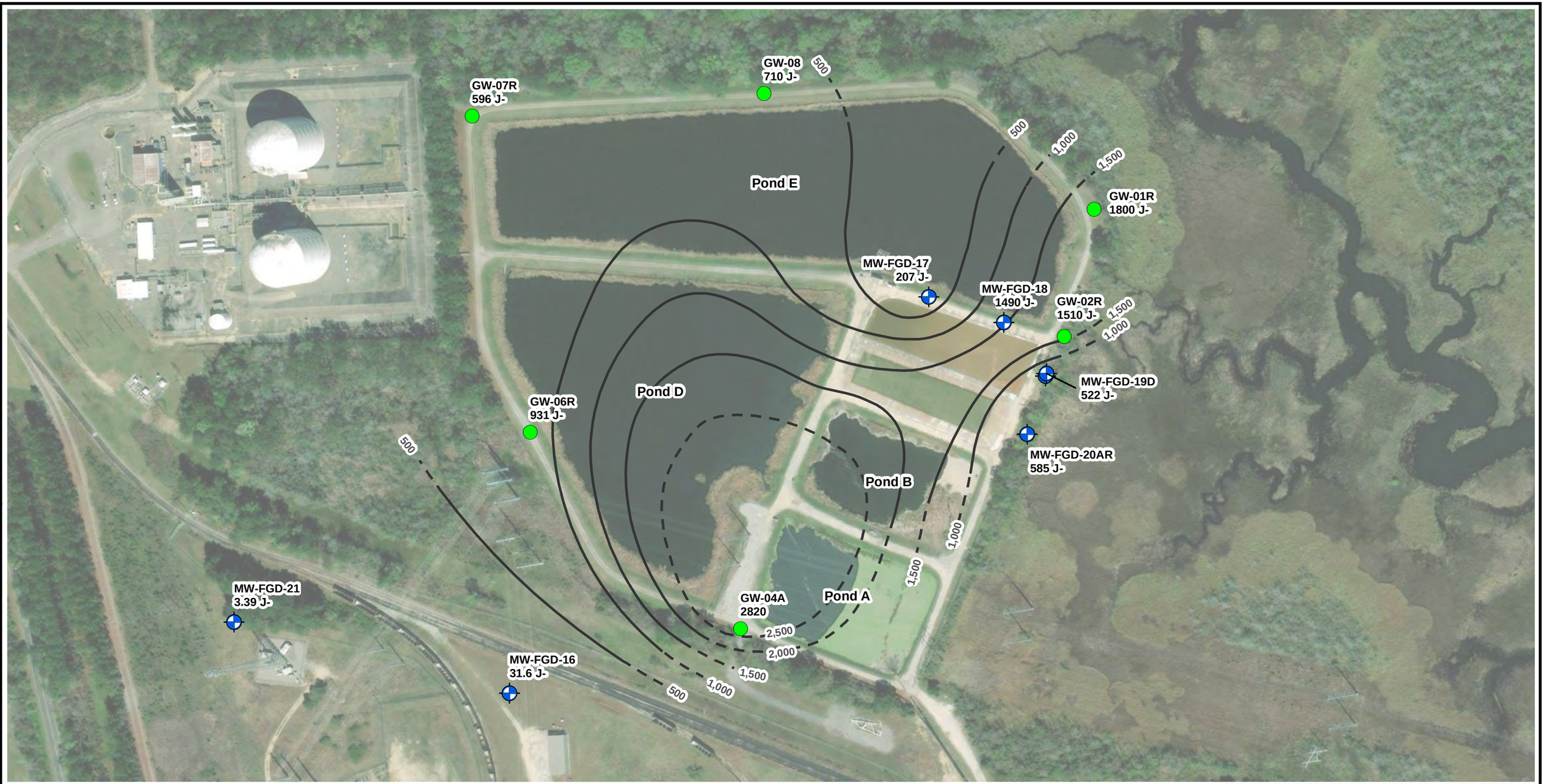
DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL		
APPROVED BY:	R. MAYER		**FIGURE 5**
DATE:	SEPTEMBER 2022		

TRC
50 International Drive, Suite 150
Patewood Plaza Three
Greenville, SC 29615
Phone: 864.281.0030
www.TRCcompanies.com

FILE NO.: Figure5_Williams_FGD_CCR_Calcium_2022Q2.mxd

Plot Date: 9/23/2022, 10:21:51 AM by JYONTS -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\Dominion\South Carolina\6 Williams SC\Williams Station\2022\Figure5 Williams FGD CCR Calcium 2022Q2.mxd
Coordinate System: NAD 1983 StatePlane South Carolina FIPS 3900 Feet (Foot US)
Map Rotation: 0

TRC - GIS



LEGEND

- Monitoring Well
- Other Program Monitoring Well
- New FGD Pond
- Approximate Chloride Isoconcentration Line Dashed where Inferred; mg/L
- J- Concentration Considered an Estimate Biased Low Based on Data Validation

N W E S

Note:
1) Aerial Image from ESRI World Imagery dated March 2022.
2) Background threshold value for Chloride = 33.3 mg/L.

0 200 400 Feet

1 " = 200 '
1:2,400

PROJECT:
DESC WILLIAMS STATION
NEW FGD POND
GOOSE CREEK, SOUTH CAROLINA

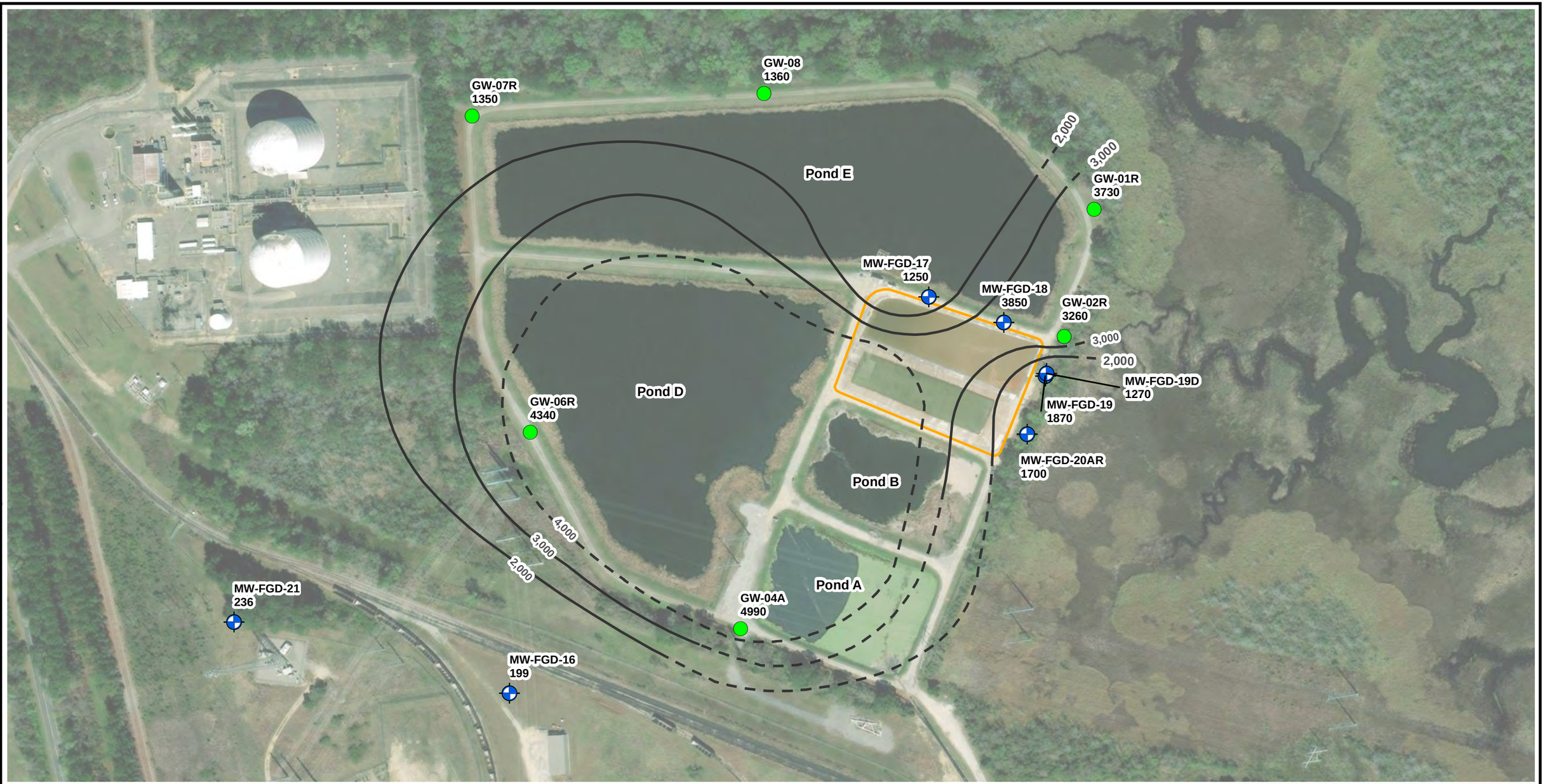
TITLE:
CHLORIDE ISOCONCENTRATION MAP
MAY 25 & 26, 2022

DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL		
APPROVED BY:	R. MAYER		**FIGURE 6**
DATE:	SEPTEMBER 2022		

TRC
50 International Drive, Suite 150
Patewood Plaza Three
Greenville, SC 29615
Phone: 864.281.0030
www.TRCcompanies.com

FILE NO.: Figure6_Williams_FGD_CCR_Chloride_2022Q2.mxd

Plot Date: 9/23/2022, 10:24:01 AM by JYONTS -- LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\Dominion\South Carolina\6 Williams SC\Williams Station\2022\Figure6 Williams FGD CCR Chloride 2022Q2.mxd
Coordinate System: NAD 1983 StatePlane South Carolina FIPS 3900 Feet (Foot US)
Map Rotation: 0
TRC - GIS



LEGEND

- Monitoring Well
- Other Program Monitoring Well
- New FGD Pond
- Approximate Total Dissolved Solids (TDS) Isoconcentration Line Dashed where Inferred; mg/L

Note:
1) Aerial Image from ESRI World Imagery dated March 2022.
2) Background threshold value for TDS = 329 mg/L.

N W E S

0 200 400 Feet

1 " = 200 '
1:2,400

PROJECT:
DESC WILLIAMS STATION
NEW FGD POND
GOOSE CREEK, SOUTH CAROLINA

TITLE:
TOTAL DISSOLVED SOLIDS ISOCONCENTRATION MAP - MARCH 22 & 23, 2022

DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL		
APPROVED BY:	R. MAYER		**FIGURE 7**
DATE:	SEPTEMBER 2022		

TRC
50 International Drive, Suite 150
Patewood Plaza Three
Greenville, SC 29615
Phone: 864.281.0030
www.TRCcompanies.com

FILE NO.: Figure7_Williams_FGD_CCR_TDS_2022Q1.mxd

Plot Date: 9/23/2022, 10:25:37 AM by JYONTS -- LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\Dominion\South Carolina\6 Williams SC\Williams Station\2022\Figure7 Williams FGD CCR TDS 2022Q1.mxd
Coordinate System: NAD 1983 StatePlane South Carolina FIPS 3900 Feet (Foot US)
Map Rotation: 0
TRC - GIS

Table

Table 1
Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station New FGD Pond
Goose Creek, Berkeley County, South Carolina

			Background Wells								Downgradient Wells																	
		Sample ID:	MW-FGD-16				MW-FGD-21				MW-FGD-17				MW-FGD-18				MW-FGD-19				MW-FGD-19D				MW-FGD-20AR			
		Sample Date:	03/22/2022				03/22/2022				03/22/2022				03/23/2022				03/23/2022				03/23/2022				03/22/2022			
Parameter Name	**Units**	**Background Threshold Values**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**	**Result**	**Qual**	**MDL**	**QL**
CCR Appendix III																														
Boron	µg/L	0.0667	**39.9**		4.0	15.0	**22.9**		4.0	15.0	**1250**		40.0	150	**7240**		200	750	**194**		20.0	75.0	**1340**		40.0	150	**3430**		80.0	300
Calcium	µg/L	41700	**12800**		30.0	100	**45200**		30.0	100	**216000**		300	1000	**421000**		600	2000	**132000**		150	500	**105000**		300	1000	**266000**		600	2000
Chloride	mg/L	33.3	**29.9**		0.335	1.00	**3.26**		0.0670	0.200	**323**		3.35	10.0	**1950**		26.8	80.0	**755**		13.4	40.0	**570**		6.70	20.0	**601**		6.70	20.0
Fluoride	mg/L	0.646	**0.300**		0.0330	0.100	**0.0767**	J	0.0330	0.100	**0.423**		0.0330	0.100	**0.537**		0.0330	0.100	**0.120**		0.0330	0.100	**0.659**		0.0330	0.100	**0.256**		0.0330	0.100
pH	SU	4.67 - 5.82	**5.01**		0.01	0.01	**5.72**		0.01	0.01	**6.16**		0.01	0.01	**6.44**		0.01	0.01	**5.60**		0.01	0.01	**6.62**		0.01	0.01	**6.47**		0.01	0.01
Sulfate	mg/L	89.2	**41.0**		0.665	2.00	**94.2**		1.33	4.00	**92.6**		6.65	20.0	**169**		53.2	160	**35.6**		1.33	4.00	**19.2**		1.33	4.00	**178**		13.3	40.0
Total Dissolved Solids	mg/L	329	**199**		3.40	14.3	**236**		3.40	14.3	**1250**		3.40	14.3	**3850**		3.40	14.3	**1870**		3.40	14.3	**1270**		3.40	14.3	**1700**		3.40	14.3
Field Parameters																														
Conductivity	µS/cm	--	**260.22**		0.1	0.1	**406.03**		0.1	0.1	**1945.7**		0.1	0.1	**6826.3**		0.1	0.1	**3083.9**		0.1	0.1	**2298.2**		0.1	0.1	**2685.7**		0.1	0.1
Dissolved Oxygen	mg/L	--	**0.92**		0.01	0.01	**0.25**		0.01	0.01	**0.41**		0.01	0.01	**0.05**		0.01	0.01	**0.11**		0.01	0.01	**0.15**		0.01	0.01	**0.11**		0.01	0.01
Temperature	C	--	**20.76**		0.01	0.01	**19.62**		0.01	0.01	**23.34**		0.01	0.01	**23.16**		0.01	0.01	**22.18**		0.01	0.01	**23.11**		0.01	0.01	**22.27**		0.01	0.01
Turbidity	NTU	--	**2.04**		0.1	0.1	**10.82**		0.1	0.1	**5.09**		0.1	0.1	**2.31**		0.1	0.1	**1.93**		0.1	0.1	**11.00**		0.1	0.1	**3.20**		0.1	0.1
Depth to Water	ft btoc	--	**9.11**		0.01	0.01	**10.09**		0.01	0.01	**7.79**		0.01	0.01	**8.81**		0.01	0.01	**10.70**		0.01	0.01	**9.37**		0.01	0.01	**6.09**		0.01	0.01
Groundwater Elevation(*)	ft msl	--	**3.59**		0.01	0.01	**3.71**		0.01	0.01	**4.19**		0.01	0.01	**2.83**		0.01	0.01	**1.79**		0.01	0.01	**3.19**		0.01	0.01	**0.90**		0.01	0.01
Oxidation Reduction Potential	millivolts	--	**239.3**		0.1	0.1	**3.0**		0.1	0.1	**-65.0**		0.1	0.1	**-70.3**		0.1	0.1	**-3.8**		0.1	0.1	**-68.8**		0.1	0.1	**-35.3**		0.1	0.1

Notes:
MDL = Method Detection Limit
QL = Quantitation Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
µS/cm = MicroSiemen per centimeter
SU = Standard Units
C = Degrees Celsius
NTU = Nephelometric Turbidity Unit
ft btoc = feet below top of casing
ft msl = feet above mean sea level
-- = Not applicable.

Qualifiers (Qual)
J = Estimated Results
U = Samples reported below their respective MDL
= Concentration greater than Background Threshold Values
Bold font = Detected constituent
* - Groundwater Elevation data collected on March 8, 2022

Appendix B
First Semiannual 2022 Detection Monitoring Program Event Field Data Sheets, Laboratory Reports, and Data Validation Forms

WILLIAMS STATION NEW FGD POND CCR - S1-2022

Date(s) Measured: 3·21·22

Well ID	Well Diameter (inches)	Well Total Depth (ft BTOC)	Well Completion	Screen length (ft)	Depth to Water (ft below TOC)	Pump
MW-FGD-16	2	18.39	Stickup	10	9.11	peristaltic
MW-FGD-17	2	17.53	Flushmount	10	7.77	peristaltic
MW-FGD-18	2	18.30	Flushmount	10	9.30	peristaltic
MW-FGD-19	2	18.58	Flushmount	10	10.70	peristaltic
MW-FGD-19D	2	28.20	Flushmount	10	9.11	peristaltic
MW-FGD-20AR	2	22.70	Stickup	10	6.09	peristaltic
MW-FGD-21	2	21.17	Stickup	10	10.07	peristaltic
GW-1R	2	28.18	Stickup	10	10.61	WL Only
GW-2R	2	31.72	Stickup	5	11.26	WL Only
GW-4A	2	32.96	Stickup	15	10.69	WL Only
GW-6R	2	28.08	Stickup	10	10.59	WL Only
GW-7R	2	26.71	Stickup	5	12.17	WL Only
GW-8	2	29.39	Stickup	10	11.54	WL Only

*Need 15/16" and 9/16" sockets for opening flushmount wells

TRC

WATER SAMPLE LOG

PROJECT NAME: Williams Station	PREPARED		CHECKED	
PROJECT NUMBER: 416559.0006.0000	BY: 3.22.22	DATE: BSM	BY: RAM	DATE: 3.28.22

SAMPLE ID: MW-FGD-16	WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER
WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL	☐ OTHER
SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE	☐ OTHER

PURGING	TIME: 1510	DATE: 3.22.22	SAMPLE	TIME: 1610	DATE: 3.22.22
PURGE METHOD:	☑ PUMP PERISTALTIC PUMP ☐ BAILER		PH: 5.01 SU	CONDUCTIVITY: 260.22 umhos/cm	
			ORP: 239.3 mV	DO: 0.92 mg/L	
DEPTH TO WATER: 9.11 T/ PVC			TURBIDITY: 2.04 NTU		
DEPTH TO BOTTOM: 18.39 T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: 1.5 ☐ LITERS ☑ GALLONS			TEMPERATURE: 20.76 °C	OTHER:	
VOLUME REMOVED: 1.8 ☐ LITERS ☑ GALLONS			COLOR: Clear	ODOR: none	
COLOR: Clear	ODOR: none		FILTRATE (0.45 um) ☐ YES ☑ NO		
TURBIDITY			FILTRATE COLOR: —	FILTRATE ODOR: —	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD	☐ DUP-	
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER			COMMENTS: Post turb: 2.20 @ 1615		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1515	125	5.24	310.26	92.5	1.75	19.3	22.33	9.12	INITIAL
1520		5.13	308.51	127.5	1.53	11.4	21.05		
1525		5.06	285.31	151.3	1.32	9.58	20.98		
1530		5.06	288.06	175.1	1.61	9.42	20.88		
1535		5.05	281.62	206.7	1.35	6.73	21.01		
1540		5.00	271.78	221.5	1.22	6.31	20.90		
1545		5.04	280.31	238.0	1.13	6.61	20.90		
1600		5.03	267.63	243.4	1.06	4.86	20.84		
1605		5.03	265.33	245.5	0.95	2.43	20.87		
1610		5.01	260.22	239.3	0.92	2.04	20.76		1.8

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED	PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
1	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: Williams Station	PREPARED		CHECKED	
PROJECT NUMBER: 416559.0006.0000	BY: AGM	DATE: 3-22-22	BY: AGM	DATE: 3-28-22

SAMPLE ID: MW-FGD-17	WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER
WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL	☐ OTHER
SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE	☐ OTHER

PURGING	TIME: 1335	DATE: 3-22-22
PURGE METHOD:	☑ PUMP PERISTALTIC PUMP ☐ BAILER	
DEPTH TO WATER: 7.79 T/ PVC		
DEPTH TO BOTTOM: 17.53 T/ PVC		
WELL VOLUME: 1.7 ☐ LITERS ☑ GALLONS		
VOLUME REMOVED: 1.1 ☐ LITERS ☑ GALLONS		
COLOR: slightly cloudy ODOR: none		
TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER		

SAMPLE	TIME: 1415	DATE: 3-22-22
PH: 6.16 SU	CONDUCTIVITY: 1945.7 umhos/cm	
ORP: -65.0 mV	DO: 0.41 mg/L	
TURBIDITY: 5.09 NTU		
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
TEMPERATURE: 23.34 °C	OTHER:	
COLOR: clear	ODOR: none	
FILTRATE (0.45 um) ☐ YES ☑ NO		
FILTRATE COLOR: —	FILTRATE ODOR: —	
QC SAMPLE: ☐ MS/MSD ☐ DUP-		
COMMENTS: Post turb: 4.34		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1340	140	6.20	1788.6	39.8	0.54	16.8	26.24	7.85	INITIAL
1345		6.13	1904.1	-13.0	0.38	8.37	22.75	7.89	
1350		6.14	1908.4	-29.0	0.37	6.61	22.71		
1355		6.16	1932.7	-51.7	0.39	6.83	23.07		
1400		6.16	1930.3	-53.1	0.41	5.95	23.02		
1405		6.16	1937.5	-58.3	0.41	5.21	23.07		
1410		6.16	1940.6	-62.8	0.41	5.38	23.47		
1415		6.16	1945.7	-65.0	0.41	5.09	23.34		1.1
Post 1420	140	—	—	—	—	4.34	—	7.89	—

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
1	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: Williams Station	PREPARED		CHECKED	
PROJECT NUMBER: 416559.0006.0000	BY: JMB	DATE: 3-23-2022	BY: RAM	DATE: 3-28-22

SAMPLE ID: MW-FGD-18	WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER
WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL	☐ OTHER
SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE	☐ OTHER

PURGING	TIME: 0859	DATE: 3-23-2022	SAMPLE	TIME: 1002	DATE: 3-23-2022
PURGE METHOD:	☑ PUMP PERISTALTIC PUMP ☐ BAILER		PH: 6.44 SU	CONDUCTIVITY: 6826.3 umhos/cm	
			ORP: -70.3 mV	DO: 0.05 mg/L	
DEPTH TO WATER: 8.81 T/ PVC			TURBIDITY: 2.31 NTU		
DEPTH TO BOTTOM: 18.30 T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: 1.6 ☐ LITERS ☑ GALLONS			TEMPERATURE: 23.16 °C	OTHER:	
VOLUME REMOVED: 3.3 ☐ LITERS ☑ GALLONS			COLOR: clear	ODOR: none	
COLOR: clear ODOR: none			FILTRATE (0.45 um) ☐ YES ☑ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☒ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER			COMMENTS: MS/MSD Collected		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
0901	150	6.38	4,758.0	97.4	0.21	4.55	22.58	8.82	INITIAL
0915		6.52	4,938.1	40.3	0.05	2.81	22.23	8.82	
0920		6.50	5,493.8	40.0	0.06	2.52	22.49	8.82	
0925		6.47	5,983.0	34.4	0.06	1.85	22.62	8.82	
0930		6.46	6,104.4	26.7	0.06	1.70	22.70	8.82	
0935		6.45	6,371.6	7.1	0.05	1.68	22.84	8.82	
0938		6.45	6,391.8	-1.2	0.05	1.61	22.85	8.82	
0941		6.44	6,609.4	-18.5	0.05	1.69	22.94	8.82	
0944		6.44	6,586.4	-30.2	0.05	1.59	22.98	8.82	
0947		6.44	6,658.6	-37.3	0.05	1.53	22.97	8.82	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
2	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
2	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME:	Williams Station	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JE / BM / AM	DATE: 3-23-2022	BY: CAM	DATE: 3-28-22

SAMPLE ID: MW-FGD-18

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0950	150	6.44	6742.4	-47.1	0.05	1.55	23.03	8.82	
0953	↓	6.44	6736.9	-55.0	0.05	1.96	23.07	8.82	
0956		6.44	6825.3	-63.1	0.05	1.94	23.08	8.82	
0959		6.43	6883.0	-67.8	0.05	1.97	23.12	8.82	
1002		6.44	6826.3	-70.3	0.05	2.31	23.16	8.82	↓
1014	↓	—	—	—	—	2.57	—	8.82	3.3

SIGNATURE: _____ DATE SIGNED: _____

TRC WATER SAMPLE LOG

PROJECT NAME: Williams Station	PREPARED		CHECKED	
PROJECT NUMBER: 416559.0006.0000	BY: BSM	DATE: 3-23-22	BY: CAM	DATE: 3-28-22

SAMPLE ID: MW-FGD-19	WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER
WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL	☐ OTHER
SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE	☐ OTHER

PURGING	TIME: 0900	DATE: 3-23-22	SAMPLE	TIME: 0935	DATE: 3-23-22
PURGE METHOD: ☑ PUMP Alexis peri. ☐ BAILER			PH: 5.60 SU	CONDUCTIVITY: 3083.9 umhos/cm	
			ORP: -3.8 mV	DO: 0.11 mg/L	
DEPTH TO WATER: 10.70 T/ PVC			TURBIDITY: 1.93 NTU		
DEPTH TO BOTTOM: 18.58 T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: 1.3 ☐ LITERS ☑ GALLONS			TEMPERATURE: 22.18 °C	OTHER:	
VOLUME REMOVED: 0.6 ☐ LITERS ☑ GALLONS			COLOR: clear	ODOR: none	
COLOR: clear ODOR: none			FILTRATE (0.45 um) ☐ YES ☑ NO		
TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			FILTRATE COLOR: —	FILTRATE ODOR: —	
			QC SAMPLE: ☐ MS/MSD	☒ DUP- WMS-FGD-22101	
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER			COMMENTS: Post turb: 2.03 Duplicate		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
0905	75	5.60	3067.2	24.7	0.13	4.22	22.44	10.78	INITIAL
0910		5.62	3136.8	5.1	0.09	3.40	22.22	10.95	
0915		5.62	3128.8	-1.0	0.10	2.46	21.82	11.01	
0920		5.62	3113.4	-2.4	0.10	2.61	21.88	11.05	
0925		5.61	3099.8	-2.9	0.10	2.54	21.88	11.17	
0930		5.61	3105.2	-3.9	0.11	1.94	21.98	11.29	
0935	✓	5.60	3083.9	-3.8	0.11	1.93	22.18	11.39	.6
Post 0945	75	—	—	—	—	2.03	—	11.48	—

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
1	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: Williams Station	PREPARED		CHECKED	
PROJECT NUMBER: 416559.0006.0000	BY: AGM	DATE: 3.23.22	BY: AM	DATE: 3-28-22

SAMPLE ID: MW-FGD-19D WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0910	DATE: 3.23.22

PURGE METHOD: ☑ PUMP PERISTALTIC PUMP ☐ BAILER

DEPTH TO WATER: 09.37 T/ PVC

DEPTH TO BOTTOM: 28.20 T/ PVC

WELL VOLUME: 3.2 ☐ LITERS ☑ GALLONS

VOLUME REMOVED: 1.3 ☐ LITERS ☑ GALLONS

COLOR: cloudy ODOR: none

TURBIDITY ☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER

SAMPLE	TIME: 1020	DATE: 3.23.20

PH: 6.62 SU CONDUCTIVITY: 23983 23983 umhos/cm

ORP: -68.8 mV DO: 0.15 mg/L

TURBIDITY: 11.00 NTU

☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 23.11 °C OTHER:

COLOR: slightly cloudy ODOR: none

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: — FILTRATE ODOR: —

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS: FBLK WMS-FGD-220202 @ 0930 Post turb: 11.18

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
0915	60	6.07	2210.5	124.7	0.85	17.7	23.63	9.40	INITIAL
0920		6.29	2304.5	91.0	0.22	13.1	22.00	9.50	
0925		6.43	2305.7	68.5	0.29	9.87	22.04	9.49	
0930		6.48	2309.2	52.8	0.25	10.56	22.13		
0935		6.51	2310.2	40.0	0.22	15.37	22.22		
0940		6.52	2311.0	28.5	0.21	12.01	22.31		
0945		6.54	2310.8	8.3	0.20	10.03	22.46		
1005		6.60	2301.7	-55.2	0.16	11.95	22.68		
1010		6.61	22967	-60.3	0.16	10.07	22.93		
1015		6.62	2301.3	-64.2	0.15	10.41	22.93		

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
1	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: Williams Station	PREPARED		CHECKED	
PROJECT NUMBER: 416559.0006.0000	BY: IB / BM / AN	DATE: 3.23.22	BY: RAM	DATE: 3-28-22

SAMPLE ID: MW-FGD-19D

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1020	60	6.62	2298.2	-68.8	0.15	11.00	23.11	9.49	1.3
post 1033	60	—	—	—	—	11.18	—	9.49	—

SIGNATURE: _____ DATE SIGNED: _____

WATER SAMPLE LOG

PROJECT NAME: Williams Station	PREPARED		CHECKED	
PROJECT NUMBER: 416559.0006.0000	BY: BJM	DATE: 3.22.22	BY: RAM	DATE: 3-28-22

SAMPLE ID: MW-FGD-20AR | WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1340	DATE: 3.22.22	SAMPLE	TIME: 1420	DATE: 3.22.22

PURGE METHOD: ☑ PUMP PERISTALTIC PUMP ☐ BAILER

DEPTH TO WATER: 6.09 T/ PVC

DEPTH TO BOTTOM: 22.70 T/ PVC

WELL VOLUME: 2.7 ☐ LITERS ☑ GALLONS

VOLUME REMOVED: 1.2 ☐ LITERS ☑ GALLONS

COLOR: Clear w/ Blk floaters ODOR: none

TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER

PH: 6.47 SU CONDUCTIVITY: 2685.7 umhos/cm

ORP: -35.3 mV DO: 0.11 mg/L

TURBIDITY: 3.20 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 22.27 °C OTHER:

COLOR: Clear ODOR: none

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: — FILTRATE ODOR: —

QC SAMPLE: ☐ MS/MSD ☑ DUP-

COMMENTS: Post turb: 3.47

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1345	135	6.33	2618.7	33.7	1.55	7.31	22.82	6.11	INITIAL
1350		6.39	2690.6	10.2	0.32	6.61	22.21	6.14	
1355		6.43	2677.4	-12.2	0.19	6.12	22.22		
1400		6.45	2679.1	-20.1	0.16	5.76	22.21		
1405		6.46	2681.6	-24.9	0.14	5.46	22.20		
1410		6.45	2679.5	-27.3	0.12	5.00	22.37		
1415		6.46	2676.3	-32.4	0.12	4.73	22.47		
1420		6.47	2685.7	-35.3	0.11	3.20	22.27		1.2
1425	135	—	—	—	—	3.47	—	6.14	—

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
1	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: Williams Station	PREPARED		CHECKED	
PROJECT NUMBER: 416559.0006.0000	BY: AGM	DATE: 3.22.22	BY: RAM	DATE: 3-28-22

SAMPLE ID: MW-FGD-21	WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER
WELL MATERIAL:	☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER
SAMPLE TYPE:	☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1523	DATE: 3.22.22	SAMPLE	TIME: 1725	DATE: 3.22.22
PURGE METHOD:	☑ PUMP PERISTALTIC PUMP ☐ BAILER		PH: 5.72 SU	CONDUCTIVITY: 406.03 umhos/cm	
			ORP: 3.0 mV	DO: 0.25 mg/L	
DEPTH TO WATER: 10.09 T/ PVC			TURBIDITY: 10.82 NTU		
DEPTH TO BOTTOM: 21.17 T/ PVC			☒ NONE ☑ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: 1.9 ☐ LITERS ☑ GALLONS			TEMPERATURE: 19.62 °C	OTHER:	
VOLUME REMOVED: 2.6 ☐ LITERS ☑ GALLONS			COLOR: clear	ODOR: none	
COLOR: cloudy ODOR: none			FILTRATE (0.45 um) ☐ YES ☑ NO		
TURBIDITY			FILTRATE COLOR: —	FILTRATE ODOR: —	
☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD	☐ DUP-	
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER			COMMENTS: Post turb' 8.75		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1520	85	5.93	411.44	-14.3	4.03	74.1	24.17	10.30	INITIAL
1535		5.86	432.78	-6.6	0.63	48.9	21.19	10.35	
1540		5.85	435.54	-4.4	0.41	36.5	20.67		
1705		5.73	405.04	1.7	0.23	21.4	20.30		
1710		5.73	408.60	2.2	0.22	13.2	20.08		
1715		5.73	409.65	2.4	0.22	11.77	19.73		
1720		5.73	408.14	3.0	0.24	11.32	19.62		
1725		5.72	406.03	3.0	0.25	10.82	19.62		2.6
Post 1731	85					8.75		10.35	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 3 % ORP: +/- D.O.: +/- TURB: +/- 10 % or </= 5 TEMP.: +/-

BOTTLES FILLED	PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
1	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Williams Station	MODEL: AQUA TROLL 400	SAMPLER: (JBY) BM / AM
PROJECT NO.:	416559.0006.0000	SERIAL #: 728566	DATE: 3-23-2022

PH CALIBRATION CHECK

	pH 7 (LOT #): 21010066 (EXP. DATE): 08/2022 PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 21080189 (EXP. DATE): 06/2022 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME
pre	6.83 / 7.00	9.76 / 10.00	☐ WITHIN RANGE	0829
pre	/	4.56 / 4.00	☐ WITHIN RANGE	0833
post	7.02 / 7.00	10.05 / 10.00	☒ WITHIN RANGE	0831
post	/	3.98 / 4.00	☒ WITHIN RANGE	0834

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

	CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
pre	4464 / 4490	20.34	☐ WITHIN RANGE	0836
post	4487 / 4490	20.40	☒ WITHIN RANGE	0838
	/		☐ WITHIN RANGE	
	/		☐ WITHIN RANGE	

ORP CALIBRATION CHECK

	CAL. READING (LOT #): 21140143 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
pre	218 / 228	20.26	☐ WITHIN RANGE	0838
post	228 / 228	20.29	☒ WITHIN RANGE	0839
	/		☐ WITHIN RANGE	
	/		☐ WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING (mg/L)	CAL. RANGE	TIME
Baro: 762.60 mm Hg Temp: 18.37 °C Calc: 9.40 mg/L Act: 9.47 mg/L	☒ WITHIN RANGE	0820
	☐ WITHIN RANGE	
	☐ WITHIN RANGE	
	☐ WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): 20480085 (0.0 NTU) (EXP. DATE): June 2022 PRE-CAL. READING / STANDARD	(LOT #): 20510114 (1.00) NTU (EXP. DATE): June 2022 POST-CAL. READING / STANDARD	CAL. RANGE	TIME
0.06 / 0.00	0.00 / 0.00	☒ WITHIN RANGE	0839
0.97 / 1.00	1.01 / 1.00	☒ WITHIN RANGE	0840
9.51 / 10.00	9.71 / 10.00	☒ WITHIN RANGE	0842
/	/	☐ WITHIN RANGE	

COMMENTS

☑ AUTOCAL SOLUTION (LOT #): 21470032 (EXP. DATE): 04/2022

☐ STANDARD SOLUTION (S)

LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK

CALIBRATED PARAMETERS		CALIBRATION RANGES [1]	
☑	pH	pH:	+/- 0.2 S.U.
☑	COND	COND:	+/- 1% OF CAL. STANDARD
☐	ORP	ORP:	+/- 25 mV
☐	D.O.	D.O.:	VARIES
☐	TURB	TURB:	+/- 5% OF CAL. STANDARD
☐	_____	[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER	
☐	_____		

NOTES

LaMotte 2020t turbidimeter

Lot # for 10.00 NTU cal standard = 20500177 exp 6/22

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS
NONE	NONE

SIGNED _____ DATE 3-28-2022

CHECKED BY J. Yonts DATE 3/28/2022

REVISED 06/2011

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Williams Station	MODEL: AQUA TROLL 400	SAMPLER: JB / BM / AM
PROJECT NO.:	416559.0006.0000	SERIAL #: 728550	DATE: 3.23.22

PH CALIBRATION CHECK

	pH 7 (LOT #): 21010066 (EXP. DATE): 08/2022 PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 21080189 (EXP. DATE): 06/2022 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME
	6.78 / 7.00	4.20 / 4.00	☐ WITHIN RANGE	0810/0815
Post	7.00 / 7.00	4.00 / 4.00	☒ WITHIN RANGE	0812/0820
	/	/	☐ WITHIN RANGE	
	/	/	☐ WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

	CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
	4.55 / 4.49	21.28	☐ WITHIN RANGE	0815
	4.49 / 4.49	21.53	☒ WITHIN RANGE	0820
	/		☐ WITHIN RANGE	
	/		☐ WITHIN RANGE	

ORP CALIBRATION CHECK

	CAL. READING (LOT #): 21140143 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
	219 / 228	21.78	☐ WITHIN RANGE	0830
Post	228 / 228	21.86	☒ WITHIN RANGE	0835
	/		☐ WITHIN RANGE	
	/		☐ WITHIN RANGE	

D.O. CALIBRATION CHECK

	CALIBRATION READING (mg/L)	CAL. RANGE	TIME
	Baro: 763 mmHg Temp: 21.55 °C Calc: 8.9 mg/L Actual: 8.89 mg/L	☒ WITHIN RANGE	0825
		☐ WITHIN RANGE	
		☐ WITHIN RANGE	
		☐ WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

	CALIBRATION READING (NTU) (LOT #): 20480085 (0.0 NTU) (EXP. DATE): June 2022 PRE-CAL. READING / STANDARD	(LOT #): 20510114 (1.00) NTU (EXP. DATE): June 2022 POST-CAL. READING / STANDARD	CAL. RANGE	TIME
	0.72 / 0	0.03 / 0	☒ WITHIN RANGE	0840
	1.68 / 1	1.08 / 1	☒ WITHIN RANGE	
	10.03 / 10	9.95 / 10	☒ WITHIN RANGE	
	/	/	☐ WITHIN RANGE	

COMMENTS

☑ AUTOCAL SOLUTION (LOT #): 21470032 (EXP. DATE): 04/2022

☐ STANDARD SOLUTION (S)

LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK

CALIBRATED PARAMETERS		CALIBRATION RANGES (1)	
☑	pH	pH:	+/- 0.2 S.U.
☑	COND	COND:	+/- 1% OF CAL. STANDARD
☐	ORP	ORP:	+/- 25 mV
☐	D.O.	D.O.:	VARIES
☐	TURB	TURB:	+/- 5% OF CAL. STANDARD
☐	_____	(1) CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER	
☐	_____		

NOTES

LaMotte 2020t turbidimeter

Lot # for 10.00 NTU cal standard = 20500177 exp 6/22

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS
NONE	NONE

3-28-2022

SIGNED DATE

J. Yonts 3/28/2022

CHECKED BY DATE

REVISED 06/2011

TRC

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Williams Station	MODEL: AQUA TROLL 400	SAMPLER: JB / BM / (AM)
PROJECT NO.:	416559.0006.0000	SERIAL #: 851425	DATE: 3.23.22

PH CALIBRATION CHECK

pH 7 (LOT #): 21010066 (EXP. DATE): 08/2022 PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 21080189 (EXP. DATE): 06/2022 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME
6.59 / 7.00	4.23 / 4.00	☐ WITHIN RANGE	0819
Post 7.00 / 7.00	4.00 / 4.00	☑ WITHIN RANGE	0821
/	/	☐ WITHIN RANGE	
/	/	☐ WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
4.30 / 4.49	21.37	☐ WITHIN RANGE	0824
Post 4.49 / 4.49		☑ WITHIN RANGE	0827
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140143 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
216.1 / 228	22.58	☐ WITHIN RANGE	0832
Post 228.1 / 228	22.44	☑ WITHIN RANGE	0834
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING (mg/L)	CAL. RANGE	TIME
Baro: 763 mmHg Temp: 21.83°C Actual: 8.73 calc: 8.8	☑ WITHIN RANGE	0830
	☐ WITHIN RANGE	
	☐ WITHIN RANGE	
	☐ WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): 20480085 (0.0 NTU) (EXP. DATE): June 2022 PRE-CAL. READING / STANDARD	(LOT #): 20510114 (1.00) NTU (EXP. DATE): June 2022 POST-CAL. READING / STANDARD	CAL. RANGE	TIME
1.92 / 0	0 / 0	☒ WITHIN RANGE	0837
2.87 / 1	0.88 / 1	☐ WITHIN RANGE	
11.52 / 10	9.81 / 10	☐ WITHIN RANGE	
/	/	☐ WITHIN RANGE	

COMMENTS

☑ AUTOCAL SOLUTION (LOT #): 21470032 (EXP. DATE): 04/2022	☐ STANDARD SOLUTION (S) LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK

CALIBRATED PARAMETERS		CALIBRATION RANGES (1)	
☑	pH	pH:	+/- 0.2 S.U.
☑	COND	COND:	+/- 1% OF CAL. STANDARD
☐	ORP	ORP:	+/- 25 mV
☐	D.O.	D.O.:	VARIES
☐	TURB	TURB:	+/- 5% OF CAL. STANDARD
☐	_____	(1) CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER	
☐	_____		

NOTES

LaMotte 2020t turbidimeter

Lot # for 10.00 NTU cal standard = 20500177 exp 6/22

710-0711

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS
NONE	NONE

3-28-2022
SIGNED DATE

J. Yonts 3/28/2022
CHECKED BY DATE

REVISED 06/2011

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

March 28, 2022

Kelly Hicks
Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, Virginia 23219

Re: CCR Groundwater Monitoring - Level 1 Package
Work Order: 574160

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 23, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1648.

Sincerely,

Meredith Boddiford

Meredith Boddiford
Project Manager

Purchase Order: 50149867
Chain of Custody: 204262
Enclosures

Table of Contents

Case Narrative

Receipt Narrative
for
Dominion Energy (50149867)
SDG: 574160

March 28, 2022

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on March 23, 2022 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

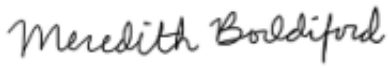
Sample Identification: The laboratory received the following samples:

Laboratory ID	Client ID
574160001	MW-FGD-16-2022Q1
574160002	MW-FGD-17-2022Q1
574160003	MW-FGD-18-2022Q1
574160004	MW-FGD-19-2022Q1
574160005	MW-FGD-19D-2022Q1
574160006	MW-FGD-20AR-2022Q1
574160007	MW-FGD-21-2022Q1
574160008	FBLK-WMS-FGD-22101
574160009	FBLK-WMS-FGD-22102
574160010	DU-WMS-FGD-22101

Case Narrative:

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry and Metals.



Meredith Boddiford
Project Manager

Chain of Custody and Supporting Documentation

Page: 1 of 1

Project # 416559.6.0.6.2
GEL Quote #:
COC Number [1]: 2022148
PO Number: PO 50149867
Client Name: Dominion Energy
Project/Site Name: Williams Station New FGD CCR 2022Q1
Address: Goose Creek, South Carolina
Collected By: J. Bradley / B. Medlin
Send Results To: AReed@envstd.com
Phone # 803-258-1528
Fax #

574160

GEL Laboratories LLC gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: 204262 *GEL Project Manager: Meredith Boddiford*

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	TDS-SM2540C	Cl, Fl, SO4-EPA 300.0	Total APP III Metals (NI)	Comments: Note: extra sample is required for sample specific QC
MW-FGD-16-2022Q1	3.22.22	1610	N	N	GW	N		3	1	1	1	
MW-FGD-17-2022Q1	3.22.22	1415	N	N	GW	N		3	1	1	1	EPA 200.7 - B, Ca
MW-FGD-18-2022Q1 / MS/MSD	3.23.22	1002	N	N	GW	N		6	2	2	2	
MW-FGD-19-2022Q1	3.23.22	0935	N	N	GW	N		3	1	1	1	
MW-FGD-19D-2022Q1	3.23.22	1020	N	N	GW	N		3	1	1	1	
MW-FGD-20AR-2022Q1	3.22.22	1420	N	N	GW	N		3	1	1	1	
MW-FGD-21-2022Q1	3.22.22	1725	N	N	GW	N		3	1	1	1	see attached work
FBLK-WMS-FGD-22101	3.22.22	1615	FB	N	AQ	N		3	1	1	1	order for details
FBLK-WMS-FGD-22102	3.23.22	0930	FB	N	AQ	N		3	1	1	1	
DU-WMS-FGD-22101	3.23.22	/	FD	N	GW	N		3	1	1	1	

<-- Preservative Type (6)

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[illegible signature]	3-23-2022	1552	[illegible signature]	3/23/22	1552
2						
3						

TAT Requested: Normal: _X_ Rush: ____ Specify: ______

Fax Results: [ ] Yes [X] No

Select Deliverable: [ ] C of A [ ] QC Summary [X] level 1 [ ] Level 2 [ ] Level 3 [ ] Level 4

Additional Remarks:

For Lab Receiving Use Only:** Custody Seal Intact? [ ] Yes [ ] No* ***Cooler Temp: ____ °C

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

***Sample Collection Time Zone*:** [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B - 3, 6010B/7470A - 1*).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

***Please provide any additional details below regarding handling and/or disposal concerns.** (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMNN

Received By: TYE

SDG/AR/COC/Work Order: 574156 / 574160

Date Received: 3/23/22

Enter one tracking number per line below.

Enter courier if applicable and no tracking available.

Courier

Courier

IR temperature gun #_____ Daily Calibration performed? Y/N

Uncorrected temperature readings are to the 0.1 degree with final recorded tepmeratures rounded to the 0.5 degree. Provide individual container details when a cooler requiring 0 </=6oC is identified as out of specification.

Uncorrected Temp: 0.1	IR Correction Factor: +/- 1	Final Recorded Temp: 0.5	Within 0.0-6.0C? Y/N	
Uncorrected Temp: 0.8	IR Correction Factor: +/- 1	Final Recorded Temp: 1.0	Within 0.0-6.0C? Y/N	
Uncorrected Temp:	IR Correction Factor: +/-	Final Recorded Temp:	Within 0.0-6.0C? Y/N	
Uncorrected Temp:	IR Correction Factor: +/-	Final Recorded Temp:	Within 0.0-6.0C? Y/N	
Uncorrected Temp:	IR Correction Factor: +/-	Final Recorded Temp:	Within 0.0-6.0C? Y/N	
Uncorrected Temp:	IR Correction Factor: +/-	Final Recorded Temp:	Within 0.0-6.0C? Y/N	

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
4	Samples requiring cold preservation were unpacked directly into cold storage	✓			Uncorrected Temp: Correction Factor: +/- Final Recorded Temp: Within 0.0-6.0C? Y/N
5	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
6	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
7	Samples received within holding time?	✓			ID's and tests affected:
8	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
9	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
10	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
11	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
12	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AM Date 3/24/22 Page 1 of 1

GL-CHL-SR-001A Rev 1

Laboratory Certifications

List of current GEL Certifications as of 28 March 2022

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122021−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2019−165
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−21−19
Utah NELAP	SC000122021−36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
Dominion Energy
SDG #: 574160

Product: Determination of Metals by ICP-MS
Analytical Method: EPA 200.8 SC_NPDES
Analytical Procedure: GL-MA-E-014 REV# 35
Analytical Batch: 2244931

Preparation Method: EPA 200.2
Preparation Procedure: GL-MA-E-016 REV# 18
Preparation Batch: 2244930

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
574160001	MW-FGD-16-2022Q1
574160002	MW-FGD-17-2022Q1
574160003	MW-FGD-18-2022Q1
574160004	MW-FGD-19-2022Q1
574160005	MW-FGD-19D-2022Q1
574160006	MW-FGD-20AR-2022Q1
574160007	MW-FGD-21-2022Q1
574160008	FBLK-WMS-FGD-22101
574160009	FBLK-WMS-FGD-22102
574160010	DU-WMS-FGD-22101
1205048656	Method Blank (MB)**ICP-MS**
1205048657	Laboratory Control Sample (LCS)
1205048660	574160003(MW-FGD-18-2022Q1L) Serial Dilution (SD)
1205048658	574160003(MW-FGD-18-2022Q1D) Sample Duplicate (DUP)
1205048659	574160003(MW-FGD-18-2022Q1S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 574160002 (MW-FGD-17-2022Q1), 574160003 (MW-FGD-18-2022Q1), 574160004 (MW-FGD-19-2022Q1), 574160005 (MW-FGD-19D-2022Q1), 574160006 (MW-FGD-20AR-2022Q1) and 574160010 (DU-WMS-FGD-22101) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	574160					
	002	**003**	**004**	**005**	**006**	**010**
Boron	10X	50X	5X	10X	20X	5X
Calcium	10X	20X	5X	10X	20X	5X

Miscellaneous Information

Additional Comments

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMNN001 Dominion Energy (50149867)

Client SDG: 574160 GEL Work Order: 574160

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
B Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature:  **Name: Edmund Frampton**

Date: 04 APR 2022 **Title: Group Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160001 **BASIS:** As Received **DATE COLLECTED** 22−MAR−22

CLIENT ID: MW−FGD−16−2022Q1 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	39.0	ug/L		4.00	15.0	15.0	1	MS	SKJ	03/30/22 20:04	220330−1	2244931
7440−70−2	Calcium	12800	ug/L		30.0	100	100	1	MS	SKJ	03/30/22 20:04	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160002 **BASIS:** As Received **DATE COLLECTED** 22−MAR−22

CLIENT ID: MW−FGD−17−2022Q1 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	1250	ug/L		40.0	150	150	10	MS	SKJ	03/30/22 20:06	220330−1	2244931
7440−70−2	Calcium	216000	ug/L		300	1000	1000	10	MS	SKJ	03/30/22 20:06	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160003 **BASIS:** As Received **DATE COLLECTED** 23−MAR−22

CLIENT ID: MW−FGD−18−2022Q1 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	7240	ug/L		200	750	750	50	MS	SKJ	03/30/22 20:12	220330−1	2244931
7440−70−2	Calcium	421000	ug/L		600	2000	2000	20	MS	SKJ	03/30/22 20:30	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160004 **BASIS:** As Received **DATE COLLECTED** 23−MAR−22

CLIENT ID: MW−FGD−19−2022Q1 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	194	ug/L		20.0	75.0	75.0	5	MS	SKJ	03/31/22 13:35	220330	2244931
7440−70−2	Calcium	132000	ug/L		150	500	500	5	MS	SKJ	03/30/22 20:38	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160005 **BASIS:** As Received **DATE COLLECTED** 23−MAR−22

CLIENT ID: MW−FGD−19D−2022Q1 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	1340	ug/L		40.0	150	150	10	MS	SKJ	03/31/22 13:37	220330	2244931
7440−70−2	Calcium	105000	ug/L		300	1000	1000	10	MS	SKJ	03/30/22 20:40	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160006 **BASIS:** As Received **DATE COLLECTED** 22−MAR−22

CLIENT ID: MW−FGD−20AR−2022Q1 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	3430	ug/L		80.0	300	300	20	MS	SKJ	03/31/22 13:39	220330	2244931
7440−70−2	Calcium	266000	ug/L		600	2000	2000	20	MS	SKJ	03/30/22 20:42	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160007 **BASIS:** As Received **DATE COLLECTED** 22−MAR−22

CLIENT ID: MW−FGD−21−2022Q1 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	22.9	ug/L		4.00	15.0	15.0	1	MS	SKJ	03/31/22 13:44	220330	2244931
7440−70−2	Calcium	45200	ug/L		30.0	100	100	1	MS	SKJ	03/30/22 20:48	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160008 **BASIS:** As Received **DATE COLLECTED** 22−MAR−22

CLIENT ID: FBLK−WMS−FGD−22101 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: AQ **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	4.00	ug/L	U	4.00	15.0	15.0	1	MS	SKJ	03/31/22 13:46	220330	2244931
7440−70−2	Calcium	30.0	ug/L	U	30.0	100	100	1	MS	SKJ	03/30/22 20:51	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160009 **BASIS:** As Received **DATE COLLECTED** 23−MAR−22

CLIENT ID: FBLK−WMS−FGD−22102 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: AQ **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	4.00	ug/L	U	4.00	15.0	15.0	1	MS	SKJ	03/31/22 13:48	220330	2244931
7440−70−2	Calcium	30.0	ug/L	U	30.0	100	100	1	MS	SKJ	03/30/22 20:53	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574160 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 574160010 **BASIS:** As Received **DATE COLLECTED** 22−MAR−22

CLIENT ID: DU−WMS−FGD−22101 **LEVEL:** Low **DATE RECEIVED** 23−MAR−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	193	ug/L		20.0	75.0	75.0	5	MS	SKJ	03/31/22 13:50	220330	2244931
7440−70−2	Calcium	140000	ug/L		150	500	500	5	MS	SKJ	03/30/22 20:55	220330−1	2244931

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2244931	2244930	EPA 200.2	50	mL	50	mL	03/24/22	LG2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 574160

Contract: DMNN00101 **Lab Code:** GEL

Instrument ID: ICPMS11

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Boron	99.8	ug/L	100	ug/L	99.8	90.0 − 110.0	MS	30−MAR−22 18:05	220330−1
	Calcium	4870	ug/L	5000	ug/L	97.3	90.0 − 110.0	MS	30−MAR−22 18:05	220330−1
CCV01										
	Boron	96.9	ug/L	100	ug/L	96.9	90.0 − 110.0	MS	30−MAR−22 18:15	220330−1
	Calcium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	30−MAR−22 18:15	220330−1
CCV02										
	Boron	101	ug/L	100	ug/L	100.8	90.0 − 110.0	MS	30−MAR−22 18:21	220330−1
	Calcium	5030	ug/L	5000	ug/L	100.5	90.0 − 110.0	MS	30−MAR−22 18:21	220330−1
CCV03										
	Boron	93.6	ug/L	100	ug/L	93.6	90.0 − 110.0	MS	30−MAR−22 19:56	220330−1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 − 110.0	MS	30−MAR−22 19:56	220330−1
CCV04										
	Boron	95	ug/L	100	ug/L	95	90.0 − 110.0	MS	30−MAR−22 20:08	220330−1
	Calcium	4880	ug/L	5000	ug/L	97.6	90.0 − 110.0	MS	30−MAR−22 20:08	220330−1
CCV05										
	Boron	95.7	ug/L	100	ug/L	95.7	90.0 − 110.0	MS	30−MAR−22 20:26	220330−1
	Calcium	4840	ug/L	5000	ug/L	96.7	90.0 − 110.0	MS	30−MAR−22 20:26	220330−1
CCV06										
	Boron	103	ug/L	100	ug/L	103.4	90.0 − 110.0	MS	30−MAR−22 20:44	220330−1
	Calcium	4900	ug/L	5000	ug/L	98	90.0 − 110.0	MS	30−MAR−22 20:44	220330−1
CCV07										
	Boron	94.3	ug/L	100	ug/L	94.3	90.0 − 110.0	MS	30−MAR−22 21:03	220330−1
	Calcium	4770	ug/L	5000	ug/L	95.4	90.0 − 110.0	MS	30−MAR−22 21:03	220330−1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 574160

Contract: DMNN00101 **Lab Code:** GEL

Instrument ID: ICPMS11

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Boron	16.3	ug/L	15	ug/L	108.6	70.0 − 130.0	MS	30−MAR−22 18:09	220330−1
	Calcium	223	ug/L	200	ug/L	111.6	70.0 − 130.0	MS	30−MAR−22 18:09	220330−1
CRDL02										
	Boron	12.4	ug/L	15	ug/L	82.5	70.0 − 130.0	MS	30−MAR−22 19:50	220330−1
	Calcium	227	ug/L	200	ug/L	113.3	70.0 − 130.0	MS	30−MAR−22 19:50	220330−1
CRDL03										
	Boron	16.6	ug/L	15	ug/L	110.3	70.0 − 130.0	MS	30−MAR−22 20:20	220330−1
	Calcium	238	ug/L	200	ug/L	119.2	70.0 − 130.0	MS	30−MAR−22 20:20	220330−1
CRDL04										
	Boron	14.4	ug/L	15	ug/L	96.3	70.0 − 130.0	MS	30−MAR−22 20:57	220330−1
	Calcium	218	ug/L	200	ug/L	108.9	70.0 − 130.0	MS	30−MAR−22 20:57	220330−1

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 574160

Contract: DMNN00101

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Boron	4.78	+/−7.5	B	4.0	15.0	LIQ	MS	30−MAR−22 18:07	220330−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	30−MAR−22 18:07	220330−1
CCB01										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	30−MAR−22 18:17	220330−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	30−MAR−22 18:17	220330−1
CCB02										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	30−MAR−22 18:23	220330−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	30−MAR−22 18:23	220330−1
CCB03										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	30−MAR−22 19:58	220330−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	30−MAR−22 19:58	220330−1
CCB04										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	30−MAR−22 20:10	220330−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	30−MAR−22 20:10	220330−1
CCB05										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	30−MAR−22 20:28	220330−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	30−MAR−22 20:28	220330−1
CCB06										
	Boron	9.27	+/−7.5	B	4.0	15.0	LIQ	MS	30−MAR−22 20:46	220330−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	30−MAR−22 20:46	220330−1
CCB07										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	30−MAR−22 21:05	220330−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	30−MAR−22 21:05	220330−1

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 574160
Contract: DMNN00101
Matrix: GW

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1205048656								
	Boron	4.00	ug/L	+/−7.5	U	MS	4.00	15.0
	Calcium	30.0	ug/L	+/−50	U	MS	30.0	100

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
−4−
Interference Check Sample

SDG No: 574160

Contract: DMNN00101 **Lab Code:** GEL

Instrument: ICPMS11

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Boron	3.41	ug/L					30−MAR−22 18:11	220330−1
	Calcium	102000	ug/L	100000	ug/L	102	80.0 − 120.0	30−MAR−22 18:11	220330−1
ICSAB01									
	Boron	22.1	ug/L	20	ug/L	111	80.0 − 120.0	30−MAR−22 18:13	220330−1
	Calcium	102000	ug/L	100000	ug/L	102	80.0 − 120.0	30−MAR−22 18:13	220330−1
ICSA02									
	Boron	0.763	ug/L					30−MAR−22 18:52	220330−1
	Calcium	99300	ug/L	100000	ug/L	99.3	80.0 − 120.0	30−MAR−22 18:52	220330−1
ICSAB02									
	Boron	20.2	ug/L	20	ug/L	101	80.0 − 120.0	30−MAR−22 18:54	220330−1
	Calcium	98700	ug/L	100000	ug/L	98.7	80.0 − 120.0	30−MAR−22 18:54	220330−1
ICSA03									
	Boron	0.949	ug/L					30−MAR−22 19:30	220330−1
	Calcium	99000	ug/L	100000	ug/L	99	80.0 − 120.0	30−MAR−22 19:30	220330−1
ICSAB03									
	Boron	20.4	ug/L	20	ug/L	102	80.0 − 120.0	30−MAR−22 19:32	220330−1
	Calcium	96600	ug/L	100000	ug/L	96.6	80.0 − 120.0	30−MAR−22 19:32	220330−1
ICSA04									
	Boron	0.112	ug/L					30−MAR−22 19:52	220330−1
	Calcium	99100	ug/L	100000	ug/L	99.1	80.0 − 120.0	30−MAR−22 19:52	220330−1
ICSAB04									
	Boron	19.9	ug/L	20	ug/L	99.5	80.0 − 120.0	30−MAR−22 19:54	220330−1
	Calcium	101000	ug/L	100000	ug/L	101	80.0 − 120.0	30−MAR−22 19:54	220330−1
ICSA05									
	Boron	3.12	ug/L					30−MAR−22 20:22	220330−1
	Calcium	98100	ug/L	100000	ug/L	98.1	80.0 − 120.0	30−MAR−22 20:22	220330−1
ICSAB05									
	Boron	23.4	ug/L	20	ug/L	117	80.0 − 120.0	30−MAR−22 20:24	220330−1

METALS
−4−
Interference Check Sample

SDG No: 574160

Contract: DMNN00101 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Calcium	98200	ug/L	100000	ug/L	98.2	80.0 − 120.0	30−MAR−22 20:24	220330−1
ICSA06									
	Boron	1.73	ug/L					30−MAR−22 20:59	220330−1
	Calcium	98300	ug/L	100000	ug/L	98.3	80.0 − 120.0	30−MAR−22 20:59	220330−1
ICSAB06									
	Boron	21.2	ug/L	20	ug/L	106	80.0 − 120.0	30−MAR−22 21:01	220330−1
	Calcium	100000	ug/L	100000	ug/L	100	80.0 − 120.0	30−MAR−22 21:01	220330−1

METALS
−5a−

Matrix Spike Summary

SDG NO. 574160 **Client ID** MW−FGD−18−2022Q1S

Contract: DMNN00101 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 574160003 **Spike ID:** 1205048659

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Boron	ug/L		7290		7240		100	52	N/A	MS
Calcium	ug/L		409000		421000		2000	−573	N/A	MS

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

Metals
−6−
Duplicate Sample Summary

SDG No.: 574160 **Lab Code:** GEL

Contract: DMNN00101 **Client ID:** MW−FGD−18−2022Q1D

Matrix: GROUND WATER **Level:** Low

Sample ID: 574160003 **Duplicate ID:** 1205048658 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Boron	ug/L	+/−20%	7240		7470		3.16		MS
Calcium	ug/L	+/−20%	421000		421000		.0817		MS

***Analytical Methods:**
MS EPA 200.8 SC_NPDES

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 574160

Contract: DMNN00101

Aqueous LCS Source: Enviromental Express **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1205048657								
	Boron	ug/L	100	95.6		95.6	85−115	MS
	Calcium	ug/L	2000	2210		111	85−115	MS

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 574160 **Client ID** MW−FGD−18−2022Q1L

Contract: DMNN00101

Matrix: LIQUID **Level:** Low

Sample ID: 574160003 **Serial Dilution ID:** 1205048660

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Boron	145		167		15.365			MS
Calcium	21000		21400		1.752		10	MS

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 574160 **Method Type:** MS

Contract: DMNN00101 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2244930							
1205048656	MB for batch 2244930	MB	G	24−MAR−22	50mL	50mL	
1205048657	LCS for batch 2244930	LCS	G	24−MAR−22	50mL	50mL	
1205048659	MW−FGD−18−2022Q1S	MS	G	24−MAR−22	50mL	50mL	
1205048658	MW−FGD−18−2022Q1D	DUP	G	24−MAR−22	50mL	50mL	
574160001	MW−FGD−16−2022Q1	SAMPLE	G	24−MAR−22	50mL	50mL	
574160002	MW−FGD−17−2022Q1	SAMPLE	G	24−MAR−22	50mL	50mL	
574160003	MW−FGD−18−2022Q1	SAMPLE	G	24−MAR−22	50mL	50mL	
574160004	MW−FGD−19−2022Q1	SAMPLE	G	24−MAR−22	50mL	50mL	
574160005	MW−FGD−19D−2022Q1	SAMPLE	G	24−MAR−22	50mL	50mL	
574160006	MW−FGD−20AR−2022Q1	SAMPLE	G	24−MAR−22	50mL	50mL	
574160007	MW−FGD−21−2022Q1	SAMPLE	G	24−MAR−22	50mL	50mL	
574160008	FBLK−WMS−FGD−22101	SAMPLE	G	24−MAR−22	50mL	50mL	
574160009	FBLK−WMS−FGD−22102	SAMPLE	G	24−MAR−22	50mL	50mL	
574160010	DU−WMS−FGD−22101	SAMPLE	G	24−MAR−22	50mL	50mL	

General Chem Analysis

Case Narrative

General Chemistry
Technical Case Narrative
Dominion Energy
SDG #: 574160

Product: **Ion Chromatography**
Analytical Method: EPA 300.0
Analytical Procedure: GL-GC-E-086 REV# 30
Analytical Batch: 2245252

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
574160001	MW-FGD-16-2022Q1
574160002	MW-FGD-17-2022Q1
574160003	MW-FGD-18-2022Q1
574160004	MW-FGD-19-2022Q1
574160005	MW-FGD-19D-2022Q1
574160006	MW-FGD-20AR-2022Q1
574160007	MW-FGD-21-2022Q1
574160008	FBLK-WMS-FGD-22101
574160009	FBLK-WMS-FGD-22102
574160010	DU-WMS-FGD-22101
1205049364	Method Blank (MB)
1205049365	Laboratory Control Sample (LCS)
1205049366	574156011(NonSDG) Sample Duplicate (DUP)
1205049367	574160003(MW-FGD-18-2022Q1) Sample Duplicate (DUP)
1205049368	574156011(NonSDG) Post Spike (PS)
1205049369	574160003(MW-FGD-18-2022Q1) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Chloride	1205049369 (MW-FGD-18-2022Q1PS)	119* (90%-110%)
Sulfate	1205049368 (Non SDG 574156011PS)	117* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205049366 (Non SDG 574156011DUP), 1205049367 (MW-FGD-18-2022Q1DUP), 1205049368 (Non SDG 574156011PS), 1205049369 (MW-FGD-18-2022Q1PS), 574160001 (MW-FGD-16-2022Q1), 574160002 (MW-FGD-17-2022Q1), 574160003 (MW-FGD-18-2022Q1), 574160004 (MW-FGD-19-2022Q1), 574160005 (MW-FGD-19D-2022Q1), 574160006 (MW-FGD-20AR-2022Q1), 574160007 (MW-FGD-21-2022Q1) and 574160010 (DU-WMS-FGD-22101) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	574160							
	001	**002**	**003**	**004**	**005**	**006**	**007**	**010**
Chloride	5X	50X	400X	200X	100X	100X	1X	100X
Sulfate	5X	50X	400X	10X	10X	100X	10X	10X

Miscellaneous Information

Additional Comments

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

Product: **Solids, Total Dissolved**
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 19
Analytical Batch: 2246766

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
574160001	MW-FGD-16-2022Q1
574160002	MW-FGD-17-2022Q1
574160003	MW-FGD-18-2022Q1
574160004	MW-FGD-19-2022Q1
574160005	MW-FGD-19D-2022Q1
574160006	MW-FGD-20AR-2022Q1
574160007	MW-FGD-21-2022Q1
574160008	FBLK-WMS-FGD-22101
574160009	FBLK-WMS-FGD-22102
574160010	DU-WMS-FGD-22101
1205052495	Method Blank (MB)
1205052496	Laboratory Control Sample (LCS)
1205052497	574160003(MW-FGD-18-2022Q1) Sample Duplicate (DUP)
1205052498	574243005(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Duplicate Relative Percent Difference (RPD) Statement
The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Total Dissolved Solids	1205052497 (MW-FGD-18-2022Q1DUP)	14.3* (0%-5%)

Miscellaneous Information

Additional Comments
All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

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Qualifier Definition Report
for

DMNN001 Dominion Energy (50149867)

Client SDG: 574160 GEL Work Order: 574160

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Kristen Mizzell **Name: Kristen Mizzell**

Date: 06 APR 2022 **Title: Group Leader**

Sample Data Summary

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-16-2022Q1	Project:	DMNN00101
Sample ID:	574160001	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-MAR-22 16:10		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.300	0.0330	0.100	mg/L		1	HXC1	03/24/22	1600	2245252	1
Chloride		29.9	0.335	1.00	mg/L		5	HXC1	03/25/22	0552	2245252	2
Sulfate		41.0	0.665	2.00	mg/L		5					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		199	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-17-2022Q1	Project:	DMNN00101
Sample ID:	574160002	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-MAR-22 14:15		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.423	0.0330	0.100	mg/L		1	HXC1	03/24/22	1631	2245252	1
Chloride		323	3.35	10.0	mg/L		50	HXC1	03/25/22	0623	2245252	2
Sulfate		92.6	6.65	20.0	mg/L		50					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		1250	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: April 6, 2022

Company :	Dominion Energy Services, Inc.
Address :	120 Tredegar Street
	Richmond, Virginia 23219
Contact:	Kelly Hicks
Project:	CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-18-2022Q1	Project:	DMNN00101
Sample ID:	574160003	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	23-MAR-22 10:02		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.537	0.0330	0.100	mg/L		1	HXC1	03/24/22	1701	2245252	1
Chloride		1950	26.8	80.0	mg/L		400	HXC1	03/25/22	1131	2245252	2
Sulfate		169	53.2	160	mg/L		400					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		3850	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-19-2022Q1	Project:	DMNN00101
Sample ID:	574160004	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	23-MAR-22 09:35		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.120	0.0330	0.100	mg/L		1	HXC1	03/24/22	1732	2245252	1
Chloride		755	13.4	40.0	mg/L		200	HXC1	03/25/22	0654	2245252	2
Sulfate		35.6	1.33	4.00	mg/L		10	HXC1	03/25/22	0725	2245252	3
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		1870	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	4

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 300.0	
4	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-19D-2022Q1	Project:	DMNN00101
Sample ID:	574160005	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	23-MAR-22 10:20		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.659	0.0330	0.100	mg/L		1	HXC1	03/24/22	1803	2245252	1
Chloride		570	6.70	20.0	mg/L		100	HXC1	03/25/22	0756	2245252	2
Sulfate		19.2	1.33	4.00	mg/L		10	HXC1	03/25/22	0826	2245252	3
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		1270	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	4

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 300.0	
4	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-20AR-2022Q1	Project:	DMNN00101
Sample ID:	574160006	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-MAR-22 14:20		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.256	0.0330	0.100	mg/L		1	HXC1	03/24/22	1834	2245252	1
Chloride		601	6.70	20.0	mg/L		100	HXC1	03/25/22	1030	2245252	2
Sulfate		178	13.3	40.0	mg/L		100					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		1700	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-21-2022Q1	Project:	DMNN00101
Sample ID:	574160007	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-MAR-22 17:25		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.26	0.0670	0.200	mg/L		1	HXC1	03/24/22	1905	2245252	1
Fluoride	J	0.0767	0.0330	0.100	mg/L		1					
Sulfate		94.2	1.33	4.00	mg/L		10	HXC1	03/25/22	1101	2245252	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		236	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	FBLK-WMS-FGD-22101	Project:	DMNN00101
Sample ID:	574160008	Client ID:	DMNN001
Matrix:	AQ		
Collect Date:	22-MAR-22 16:15		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.146	0.0670	0.200	mg/L		1	HXC1	03/24/22	2108	2245252	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids	U	ND	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	FBLK-WMS-FGD-22102	Project:	DMNN00101
Sample ID:	574160009	Client ID:	DMNN001
Matrix:	AQ		
Collect Date:	23-MAR-22 09:30		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.175	0.0670	0.200	mg/L		1	HXC1	03/24/22	2139	2245252	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids	U	ND	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	DU-WMS-FGD-22101	Project:	DMNN00101
Sample ID:	574160010	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-MAR-22 12:00		
Receive Date:	23-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.170	0.0330	0.100	mg/L		1	HXC1	03/24/22	2210	2245252	1
Chloride		818	6.70	20.0	mg/L		100	HXC1	03/25/22	1303	2245252	2
Sulfate		37.0	1.33	4.00	mg/L		10	HXC1	03/25/22	1334	2245252	3
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		2010	3.40	14.3	mg/L			KLP1	03/29/22	1518	2246766	4

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 300.0	
4	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

Quality Control Summary

GEL LABORATORIES LLC
2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: April 6, 2022

Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, Virginia

Contact: **Kelly Hicks**

Workorder: **574160**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography										
Batch 2245252										
QC1205049366 574156011 DUP										
Chloride		15.3		14.1	mg/L	8.22 ^		(+/-8)	HXC1	03/25/22 03:49
Fluoride		0.139		0.147	mg/L	5.25 ^		(+/-.2)		03/24/22 23:42
Sulfate		256		256	mg/L	0.276		(0%-20%)		03/25/22 03:49
QC1205049367 574160003 DUP										
Chloride		1950		2000	mg/L	2.59		(0%-20%)		03/25/22 12:02
Fluoride		0.537		0.581	mg/L	7.86		(0%-20%)		03/25/22 00:44
Sulfate		169		172	mg/L	1.34 ^		(+/-320)		03/25/22 12:02
QC1205049365 LCS										
Chloride	5.00			4.99	mg/L		99.8	(90%-110%)		03/24/22 23:11
Fluoride	2.50			2.52	mg/L		101	(90%-110%)		
Sulfate	10.0			10.5	mg/L		105	(90%-110%)		
QC1205049364 MB										
Chloride			U	ND	mg/L					03/24/22 22:41
Fluoride			U	ND	mg/L					
Sulfate			U	ND	mg/L					
QC1205049368 574156011 PS										
Chloride	5.00	0.763		5.96	mg/L		104	(90%-110%)		03/25/22 04:20

QC Summary

Workorder: **574160**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography										
Batch 2245252										
Fluoride	2.50	0.139		2.86	mg/L		109	(90%-110%)	HXC1	03/25/22 00:13
Sulfate	10.0	12.8		24.5	mg/L		117*	(90%-110%)		03/25/22 04:20
QC1205049369 574160003 PS										
Chloride	5.00	4.87		10.8	mg/L		119*	(90%-110%)		03/25/22 12:32
Fluoride	2.50	0.537		2.91	mg/L		95.1	(90%-110%)		03/25/22 01:15
Sulfate	10.0	0.423		11.4	mg/L		110	(90%-110%)		03/25/22 12:32
Solids Analysis										
Batch 2246766										
QC1205052497 574160003 DUP										
Total Dissolved Solids		3850		3330	mg/L	14.3*		(0%-5%)	KLP1	03/29/22 15:18
QC1205052498 574243005 DUP										
Total Dissolved Solids		2640		2580	mg/L	2.19		(0%-5%)		03/29/22 15:18
QC1205052496 LCS										
Total Dissolved Solids	300			307	mg/L		102	(95%-105%)		03/29/22 15:18
QC1205052495 MB										
Total Dissolved Solids			U	ND	mg/L					03/29/22 15:18

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded
- J See case narrative for an explanation

QC Summary

Workorder: **574160**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

J Value is estimated

N/A RPD or %Recovery limits do not apply.

N1 See case narrative

ND Analyte concentration is not detected above the detection limit

NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.

R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

d 5-day BOD--The 2:1 depletion requirement was not met for this sample

e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the samples collected as part of:

Williams Power Station Groundwater Sampling
Samples Collected between: 3/21/2022 and 3/24/2022

This review was performed with guidance from the associated US EPA data validation guidelines and in accordance with the Quality Assurance Program Plan. These validation guidance documents specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the US EPA, SW-846, and Standard Methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the US EPA, SW-846, and Standard Methods utilized by the laboratory. This QA review was performed on the data associated with Job Number:

574160

The findings offered in this report are based on a review of holding times and preservation, method blank results, field blank results, filter blank results, equipment blank results, tubing blank results, matrix spike/matrix spike duplicate recoveries and precision, laboratory control sample/laboratory control sample duplicate recoveries and precision, laboratory and field duplicate precision, total and dissolved results comparisons, and/or positive results between the method detection limit and quantitation limit.

The following results were qualified based on the data verification effort:

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Uncertainty	Unit
MW-FGD-21-2022Q1	MW-FGD-21	N	EPA 300.0	Fluoride	N	0.0767	J	RL	0.0330	0.100		mg/L
FBLK-WMS-FGD-22101	Field Blank	FB	EPA 300.0	Chloride	N	0.146	J	RL	0.0670	0.200		mg/L
FBLK-WMS-FGD-22102	Field Blank	FB	EPA 300.0	Chloride	N	0.175	J	RL	0.0670	0.200		mg/L

Data Qualifiers	
U	The analyte was not detected above the level of the sample reporting limit.
J	Quantitation is approximate due to limitations identified during data validation.
J+	The result is an estimated quantity; the result may be biased high.
J-	The result is an estimated quantity; the result may be biased low.
UJ	The analyte was not detected; the reporting limit is approximate and may be inaccurate or imprecise.
R	Unreliable positive result; analyte may or may not be present in sample.
Reason Codes and Explanations	
BE	Equipment blank contamination.
BF	Field blank contamination.
BL	Laboratory blank contamination.
FD	Field duplicate imprecision.
FG	Total versus Dissolved Imprecision.
H	Holding time exceeded.
L	LCS and LCSD recoveries outside of acceptance limits
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
M	MS and MSD recoveries outside of acceptance limits
MP	MS/MSD imprecision.
Q	Chemical Preservation issue.
RL	Reported Results between the MDL and QL.

S	Radium-226+228 flagged due to reporting protocol for combined results
T	Temperature preservation issue.
X	Percent solids < 50%.
Y	Chemical yield outside of acceptance limits
ZZ	Other

Facility: Williams Generating Station
SDG: 574160

Lab Sample ID	574160001
Sys Sample Code	MW-FGD-16-2022Q1
Sample Name	MW-FGD-16-2022Q1
Sample Date	3/22/2022 4:10:00 PM
Location	WMS-MW-FGD-16 / MW-FGD-16
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	39.0				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	12800				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.300				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	29.9				0.335	0.335	1.00	Y	Yes	5	NA
	Sulfate	14808-79-8	N	mg/L	41.0				0.665	0.665	2.00	Y	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	199				3.40	3.40	14.3	Y	Yes	1	NA

Facility: Williams Generating Station
SDG: 574160

Lab Sample ID	574160002
Sys Sample Code	MW-FGD-17-2022Q1
Sample Name	MW-FGD-17-2022Q1
Sample Date	3/22/2022 2:15:00 PM
Location	WMS-MW-FGD-17 / MW-FGD-17
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	1250				40.0	40.0	150	Y	Yes	10	NA
	Calcium	7440-70-2	T	ug/L	216000				300	300	1000	Y	Yes	10	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.423				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	323				3.35	3.35	10.0	Y	Yes	50	NA
	Sulfate	14808-79-8	N	mg/L	92.6				6.65	6.65	20.0	Y	Yes	50	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	1250				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574160003
Sys Sample Code	MW-FGD-18-2022Q1
Sample Name	MW-FGD-18-2022Q1
Sample Date	3/23/2022 10:02:00 AM
Location	WMS-MW-FGD-18 / MW-FGD-18
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	7240				200	200	750	Y	Yes	50	NA
	Calcium	7440-70-2	T	ug/L	421000				600	600	2000	Y	Yes	20	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.537				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	1950				26.8	26.8	80.0	Y	Yes	400	NA
	Sulfate	14808-79-8	N	mg/L	169				53.2	53.2	160	Y	Yes	400	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	3850				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574160004
Sys Sample Code	MW-FGD-19-2022Q1
Sample Name	MW-FGD-19-2022Q1
Sample Date	3/23/2022 9:35:00 AM
Location	WMS-MW-FGD-19 / MW-FGD-19
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	194				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	132000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.120				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	755				13.4	13.4	40.0	Y	Yes	200	NA
	Sulfate	14808-79-8	N	mg/L	35.6				1.33	1.33	4.00	Y	Yes	10	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	1870				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574160005
Sys Sample Code	MW-FGD-19D-2022Q1
Sample Name	MW-FGD-19D-2022Q1
Sample Date	3/23/2022 10:20:00 AM
Location	WMS-MW-FGD-19D / MW-FGD-19D
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	1340				40.0	40.0	150	Y	Yes	10	NA
	Calcium	7440-70-2	T	ug/L	105000				300	300	1000	Y	Yes	10	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.659				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	570				6.70	6.70	20.0	Y	Yes	100	NA
	Sulfate	14808-79-8	N	mg/L	19.2				1.33	1.33	4.00	Y	Yes	10	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	1270				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574160006
Sys Sample Code	MW-FGD-20AR-2022Q1
Sample Name	MW-FGD-20AR-2022Q1
Sample Date	3/22/2022 2:20:00 PM
Location	WMS-MW-FGD-20AR / MW-FGD-20AR
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	3430				80.0	80.0	300	Y	Yes	20	NA
	Calcium	7440-70-2	T	ug/L	266000				600	600	2000	Y	Yes	20	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.256				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	601				6.70	6.70	20.0	Y	Yes	100	NA
	Sulfate	14808-79-8	N	mg/L	178				13.3	13.3	40.0	Y	Yes	100	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	1700				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574160007
Sys Sample Code	MW-FGD-21-2022Q1
Sample Name	MW-FGD-21-2022Q1
Sample Date	3/22/2022 5:25:00 PM
Location	WMS-MW-FGD-21 / MW-FGD-21
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	22.9				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	45200				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	3.26				0.0670	0.0670	0.200	Y	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.0767	J	RL		0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Sulfate	14808-79-8	N	mg/L	94.2				1.33	1.33	4.00	Y	Yes	10	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	236				3.40	3.40	14.3	Y	Yes	1	NA

Facility: Williams Generating Station
SDG: 574160

Lab Sample ID	574160008
Sys Sample Code	FBLK-WMS-FGD-22101
Sample Name	FBLK-WMS-FGD-22101
Sample Date	3/22/2022 4:15:00 PM
Location	WMS-FB / Field Blank
Sample Type	FB
Matrix	AQ
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L		U			4.00	4.00	15.0	N	Yes	1	NA
	Calcium	7440-70-2	T	ug/L		U			30.0	30.0	100	N	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	0.146	J	RL		0.0670	0.0670	0.200	Y	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			3.40	3.40	14.3	N	Yes	1	NA

Facility: Williams Generating Station
SDG: 574160

Lab Sample ID	574160009
Sys Sample Code	FBLK-WMS-FGD-22102
Sample Name	FBLK-WMS-FGD-22102
Sample Date	3/23/2022 9:30:00 AM
Location	WMS-FB / Field Blank
Sample Type	FB
Matrix	AQ
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L		U			4.00	4.00	15.0	N	Yes	1	NA
	Calcium	7440-70-2	T	ug/L		U			30.0	30.0	100	N	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	0.175	J	RL		0.0670	0.0670	0.200	Y	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			3.40	3.40	14.3	N	Yes	1	NA

Facility: Williams Generating Station
SDG: 574160

Lab Sample ID	574160010
Sys Sample Code	DU-WMS-FGD-22101
Sample Name	DU-WMS-FGD-22101
Sample Date	3/22/2022 12:00:00 PM
Location	WMS-MW-FGD-19 / MW-FGD-19
Sample Type	FD
Matrix	GW
Parent Sample	MW-FGD-19-2022Q1

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	193				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	140000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.170				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	818				6.70	6.70	20.0	Y	Yes	100	NA
	Sulfate	14808-79-8	N	mg/L	37.0				1.33	1.33	4.00	Y	Yes	10	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	2010				3.40	3.40	14.3	Y	Yes	1	NA

Appendix C
Second Semiannual 2022 Detection Monitoring Program Event Field Data Sheets, Laboratory Reports, and Data Validation Forms

WILLIAMS STATION NEW FGD POND CCR - S2-2022

Date(s) Measured: 9-19-22

Well ID	Well Diameter (inches)	Well Total Depth (ft BTOC)	Well Completion	Screen length (ft)	Depth to Water (ft below TOC)	Pump
MW-FGD-16	2	18.39	Stickup	10	8.37	peristaltic
MW-FGD-17	2	17.53	Flushmount	10	7.53	peristaltic
MW-FGD-18	2	18.30	Flushmount	10	8.51	peristaltic
MW-FGD-19	2	18.58	Flushmount	10	8.37	peristaltic
MW-FGD-19D	2	28.20	Flushmount	10	9.10	peristaltic
MW-FGD-20AR	2	22.70	Stickup	10	6.07	peristaltic
MW-FGD-21	2	21.17	Stickup	10	9.39	peristaltic
GW-1R	2	28.18	Stickup	10	10.52	WL Only
GW-2R	2	31.72	Stickup	5	11.25	WL Only
GW-4A	2	32.96	Stickup	15	10.11	WL Only
GW-6R	2	28.08	Stickup	10	10.09	WL Only
GW-7R	2	26.71	Stickup	5	11.50	WL Only
GW-8	2	29.39	Stickup	10	11.45	WL Only

*Need 15/16" and 9/16" sockets for opening flushmount wells

WATER SAMPLE LOG

PROJECT NAME:	Williams Station - CCR 2022Q3	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JMB	DATE: 9/20/22	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-FGD-16 | WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1533	DATE: 9/20/2022	SAMPLE	TIME: 1646	DATE: 9/20/22

PURGE METHOD: ☑ PUMP PERISTALTIC PUMP ☐ BAILER

DEPTH TO WATER: 8.48 T/ PVC

DEPTH TO BOTTOM: 18.39 T/ PVC

WELL VOLUME: 1.64 ☐ LITERS ☑ GALLONS

VOLUME REMOVED: 2.7 ☐ LITERS ☑ GALLONS

COLOR: clear ODOR: none

TURBIDITY ☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER

PH: 4.80 SU CONDUCTIVITY: 293.07 umhos/cm

ORP: 104.1 mV DO: 0.98 mg/L

TURBIDITY: 3.26 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 25.48 °C OTHER:

COLOR: clear ODOR: none

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☒ MS/MSD ☐ DU-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1537	90	4.84	397.89	69.4	2.71	5.88	27.30	11.55	INITIAL
1550		4.79	382.69	72.9	2.27	4.73	26.18	11.56	
1555		4.77	365.92	75.1	2.13	4.15	26.23	11.56	
1600		4.72	347.32	78.3	1.88	4.07	25.98	11.56	
1605		4.69	333.13	81.7	1.72	3.98	26.00	11.56	
1610		4.68	320.44	85.7	1.53	3.92	25.96	11.56	
1615		4.68	315.94	89.3	1.47	3.87	25.96	11.56	
1620		4.68	307.88	92.8	1.34	3.83	25.96	11.56	
1625		4.69	305.29	95.5	1.29	3.80	25.86	11.56	
1630		4.70	295.69	99.1	1.25	3.65	25.47	11.56	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED | PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
2	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

CCR 202223

PROJECT NAME:	Williams Station - ~~NPDES~~	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JY / JB	DATE: 9/20/22	BY: JMB	DATE: 9-23-22

1517

SAMPLE ID: MW-FGD-16

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1635	90	4.74	300.93	100.6	1.18	3.18	25.37	11.56	|
1640	|	4.75	291.22	102.3	1.07	3.21	25.32	11.56	|
1643	|	4.80	297.33	103.8	1.03	3.23	25.39	11.56	|
1646	|	4.80	293.07	104.1	0.98	3.26	25.48	11.56	2.7
post 1705	|	—	—	—	—	3.45	—	1	

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: Williams Station - CCR 2022Q3	PREPARED		CHECKED	
PROJECT NUMBER: 416559.0006.0000	BY: JMB	DATE: 9/19/22	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-FGD-17 WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1622	DATE: 9/19/22

PURGE METHOD: ☑ PUMP PERISTALTIC PUMP ☐ BAILER

DEPTH TO WATER: 7.47 T/ PVC

DEPTH TO BOTTOM: 17.53 T/ PVC

WELL VOLUME: 1.66 ☐ LITERS ☑ GALLONS

VOLUME REMOVED: 1.3 ☐ LITERS ☑ GALLONS

COLOR: clear ODOR: none

TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER

SAMPLE	TIME: 1700	DATE: 9/19/22

PH: 6.18 SU CONDUCTIVITY: 1,596 umhos/cm

ORP: -18.0 mV DO: 0.18 mg/L

TURBIDITY: 3.49 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 25.68 °C OTHER:

COLOR: clear ODOR: none

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DU-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1627	110	6.32	1,572	-26.2	0.14	5.81	26.17	7.62	INITIAL
1640		6.22	1,595	-22.2	0.16	4.01	25.73	7.63	
1645		6.21	1,594	-21.2	0.15	3.83	25.76	7.63	
1650		6.20	1,596	-19.2	0.20	3.57	25.68	7.63	
1655		6.19	1,595	-16.7	0.19	3.52	25.67	7.63	
1700		6.18	1,596	-18.0	0.18	3.49	25.68	7.63	1.3
post 1712						3.35		1	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
2	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

WATER SAMPLE LOG

PROJECT NAME:	Williams Station - CCR 2022Q3	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JMB	DATE: 9/19/22	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-FGD-18 | WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1433	DATE: 9/19/22	SAMPLE	TIME: 1550	DATE: 9/19/22

PURGE METHOD: ☑ PUMP PERISTALTIC PUMP ☐ BAILER

DEPTH TO WATER: 7.26 T/ PVC

DEPTH TO BOTTOM: 18.30 T/ PVC

WELL VOLUME: 1.82 ☐ LITERS ☑ GALLONS

VOLUME REMOVED: 3.2 ☐ LITERS ☑ GALLONS

COLOR: clear ODOR: none

TURBIDITY: ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER

PH: 6.11 SU CONDUCTIVITY: 6,687 umhos/cm

ORP: -76.7 mV DO: 0.20 mg/L

TURBIDITY: 3.25 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 25.01 °C OTHER:

COLOR: clear ODOR: none

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☒ DU- WMS-FGD-223001

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1438	110	6.01	5,245	109.3	0.27	3.95	26.70	7.70	INITIAL
1455		6.15	5,714	39.4	0.18	3.26	25.64	8.10	
1500		6.13	5,798	23.7	0.29	2.95	25.64	8.12	
1505		6.12	5,841	4.1	0.20	3.45	25.56	8.15	
1510		6.11	6,098	-23.1	0.40	3.39	25.70	8.15	
1515		6.06	6,517	-45.6	0.20	3.08	25.74	8.14	
1520		6.05	6,572	-53.4	0.30	3.10	25.64	8.14	
1525		6.06	6,635	-59.4	0.19	3.16	25.52	8.14	
1530		6.07	6,636	-65.2	0.18	3.09	25.59	8.14	
1535		6.08	6,641	-68.7	0.45	3.70	25.35	8.12	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED | PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
2	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

CCR 202203

PROJECT NAME:	Williams Station - ~~NPDES~~	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JY / JB	DATE: 9/19/22	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-FGD-18

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1540	110	6.09	6,716	-72.4	0.18	3.18	24.96	~~8~~ 8.12	1
1545	"	6.10	6,758	-74.3	0.18	3.20	24.94	8.12	"
1550	"	6.11	6,687	-76.7	0.20	3.25	25.01	8.12	3.2
POST 1615		—	—	—	—	3.01	—		

SIGNATURE: _____ DATE SIGNED: _____

WATER SAMPLE LOG

PROJECT NAME:	Williams Station - CCR 2022Q3	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JAH	DATE: 9-19-22	BY: JMB	DATE: 9-23-22

SAMPLE ID: ~~MW-FGD-19D~~ MW-FGD-19 | WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1615	DATE: 9/19/22	SAMPLE	TIME: 1658	DATE: 9/19/22

PURGE METHOD: ☒ PUMP PERISTALTIC PUMP ☐ BAILER

DEPTH TO WATER: 8.33 T/ PVC

DEPTH TO BOTTOM: ~~28.20~~ T/ PVC 18.58

WELL VOLUME: 1.69 ☐ LITERS ☑ GALLONS

VOLUME REMOVED: 0.8 ☐ LITERS ☒ GALLONS

COLOR: clear ODOR: None

TURBIDITY: ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER

PH: 5.47 SU CONDUCTIVITY: 3449.9 umhos/cm

ORP: -6.8 mV DO: 0.15 mg/L

TURBIDITY: 2.08 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 26.03 °C OTHER:

COLOR: clear ODOR: None

FILTRATE (0.45 um) ☐ YES ☒ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DU-

COMMENTS: MW-FGD-19 FBLK-WMS-FGD-20220919 @ 1720

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1618	100	5.87	4184.5	-30.1	0.10	10.09	25.90	8.66	INITIAL
1628	75	5.53	3839.4	-1.9	0.84	4.89	25.78	8.94	* can't maintain
1633	50	5.45	3671.4	3.9	1.08	2.72	25.69	9.05	drawdown
1638	50	5.44	3543.6	-4.0	0.15	2.33	25.85	9.21	
1643	50	5.46	3504.2	-5.5	0.14	2.40	25.96	9.29	
1648	50	5.46	3479.5	-6.3	0.15	2.48	26.06	9.38	
1653	50	5.47	3457.1	-6.7	0.14	2.16	26.06	9.46	
1658	50	5.47	3449.9	-6.8	0.15	2.08	26.03	9.54	Sample time
1718	50	—	—	—	—	3.52	—	9.98	Post

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
2	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

WATER SAMPLE LOG

PROJECT NAME:	Williams Station - CCR 2022Q3	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JAH	DATE: 9/19/22	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-FGD-19D — WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 1435	DATE: 9/19/22	SAMPLE	TIME: 1558	DATE: 9/19/22
PURGE METHOD:	[✓] PUMP Peristaltic		PH: 6.85 SU	CONDUCTIVITY: 2894.7 umhos/cm	
	[ ] BAILER		ORP: -127.3 mV	DO: 0.16 mg/L	
DEPTH TO WATER: 4.08 T/ PVC 1433			TURBIDITY: 1.88 NTU		
DEPTH TO BOTTOM: ~~18.58~~ T/ PVC 28.20			[X] NONE [ ] SLIGHT [ ] MODERATE [ ] VERY		
WELL VOLUME: 3.16 [ ] LITERS [✓] GALLONS			TEMPERATURE: 25.55 °C	OTHER:	
VOLUME REMOVED: 1.7 [ ] LITERS [X] GALLONS			COLOR: Clear	ODOR: None	
COLOR: Clear	ODOR: None		FILTRATE (0.45 um) [ ] YES [X] NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
[ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY			QC SAMPLE: [ ] MS/MSD	[ ] DU-	
DISPOSAL METHOD: [ ] GROUND [ ] DRUM [X] OTHER			COMMENTS: Water browns with time		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1453	50	6.56	2871.1	92.9	0.26	5.52	26.94	9.14	INITIAL
1458	50	6.63	2859.4	79.0	0.23	6.18	26.96	9.14	
1503	50	6.70	2862.9	59.6	0.20	4.89	26.90	9.08	
1508	50	6.73	2861.6	50.2	0.20	3.85	26.89	9.10	
1513	50	6.74	2866.6	25.3	0.20	3.26	27.05	9.08	
1518	50	6.76	2870.4	-9.8	0.19	4.46	27.03	9.08	
1523	50	6.79	2871.9	-49.8	0.19	3.07	26.00	9.08	
1528	50	6.80	2874.4	-64.0	0.17	3.01	26.22	9.08	
1533	75	6.83	2862.2	-91.2	0.17	2.56	25.51	9.08	
1538	75	6.84	2860.2	-101.3	0.16	2.44	25.14	9.08	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	250 mL	PLASTIC	B	[ ] Y [✓] N					[ ] Y [ ] N
2	250 mL	PLASTIC	A	[ ] Y [✓] N					[ ] Y [ ] N
1	125 mL	PLASTIC	A	[ ] Y [✓] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME:	Williams Station - CCR 2022Q3	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JP / JB	DATE: 9/19/22	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-FGD-19D

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1538	75	6.84	2860.2	-101.3	0.16	2.44	25.14	9.08	
1543	75	6.84	2900.1	-118.0	0.16	2.09	25.10	9.09	
1548	75	6.85	2899.4	-128.8	0.16	2.00	25.14	9.09	
1553	75	6.85	2894.5	-127.1	0.16	1.94	25.51	9.09	
1558	75	6.85	2894.7	-127.3	0.16	1.88	25.55	9.08	Sample time
1611	75					1.79		9.08	Post sample

SIGNATURE: _____ DATE SIGNED: _____

WATER SAMPLE LOG

PROJECT NAME:	Williams Station - CCR 2022Q3	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JAY	DATE: 9/20/22	BY: JMB	DATE: 9-23-22

SAMPLE ID:	**MW-FGD-20AR**	WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6"	☐ OTHER		
WELL MATERIAL:	☑ PVC ☐ SS	☐ IRON	☐ GALVANIZED STEEL	☐ OTHER	
SAMPLE TYPE:	☑ GW ☐ WW	☐ SW	☐ DI	☐ LEACHATE	☐ OTHER

PURGING	TIME: 1243	DATE: 9/20/22	SAMPLE	TIME: 1347	DATE: 9/20/22
PURGE METHOD:	☒ PUMP PERISTALTIC PUMP		PH: 6.49 SU	CONDUCTIVITY: 3380.3	umhos/cm
	☐ BAILER		ORP: -43.8 mV	DO: 0.12	mg/L
DEPTH TO WATER:	6.09 T/ PVC		TURBIDITY: 1.87	NTU	
DEPTH TO BOTTOM:	22.70 T/ PVC		☒ NONE ☐ SLIGHT	☐ MODERATE	☐ VERY
WELL VOLUME:	2.74 ☐ LITERS	☑ GALLONS	TEMPERATURE: 27.67 °C	OTHER:	
VOLUME REMOVED:	1.65 ☐ LITERS	☑ GALLONS	COLOR: clear	ODOR: None	
COLOR:	clear	ODOR: None	FILTRATE (0.45 um) ☐ YES	☑ NO	
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT	☐ MODERATE	☐ VERY	QC SAMPLE: ☐ MS/MSD	☑ DU-	
DISPOSAL METHOD:	☐ GROUND ☐ DRUM	☑ OTHER	COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1247	125	6.18	2659.0	59.6	0.33	3.24	27.11	6.17	INITIAL
1252	125	6.22	2630.0	46.4	0.21	3.01	28.55	6.20	
1257	125	6.23	2640.6	43.0	0.18	2.41	28.53	6.21	
1302	125	6.31	2788.6	23.5	0.14	2.89	28.26	6.22	
1307	125	6.39	3142.8	10.1	0.13	3.26	27.99	6.23	
1312	125	6.44	3357.4	-7.1	0.13	2.97	28.17	6.23	
1317	125	6.46	3378.1	-15.1	0.12	2.69	27.87	6.24	
1322	125	6.46	3387.2	-22.6	0.12	2.41	27.94	6.24	
1327	125	6.47	3402.1	-31.4	0.12	2.27	27.80	6.24	
1332	125	6.48	3384.2	-34.6	0.11	2.34	27.92	6.24	1.65

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED		PRESERVATIVE CODES A - NONE	B - HNO3	C - H2SO4	D - NaOH	E - HCL	F -

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
2	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:		DATE SHIPPED:		AIRBILL NUMBER:	
COC NUMBER:		SIGNATURE:		DATE SIGNED:	

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

CCR 202203

PROJECT NAME:	Williams Station - ~~NPDES~~	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: (JY) JB	DATE: 9/20/22	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-FGD-20AR

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1332	125	6.48	3384.2	-34.6	0.11	2.34	27.92	6.24	
1337	125	6.48	3375.7	-40.3	0.12	2.17	27.88	6.24	
1342	125	6.49	3371.4	-41.6	0.12	2.08	27.70	6.25	
1347	125	6.49	3380.3	-43.8	0.12	1.87	27.67	6.25	Sample time
1400	125	—	—	—	—	2.15	—	1	Post

SIGNATURE: _____ DATE SIGNED: _____

WATER SAMPLE LOG

PROJECT NAME:	Williams Station - CCR 2022Q3	PREPARED		CHECKED	
PROJECT NUMBER:	416559.0006.0000	BY: JMB	DATE: 9/21/22	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-FGD-21 | WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0810	DATE: 9/21/22	SAMPLE	TIME: 0853	DATE: 9/21/22

PURGE METHOD: ☑ PUMP PERISTALTIC PUMP ☐ BAILER

DEPTH TO WATER: 9.52 T/ PVC

DEPTH TO BOTTOM: 21.17 T/ PVC

WELL VOLUME: 1.92 ☐ LITERS ☑ GALLONS

VOLUME REMOVED: 1.1 ☐ LITERS ☑ GALLONS

COLOR: clear ODOR: none

TURBIDITY: ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER

PH: 5.32 SU CONDUCTIVITY: 453.15 umhos/cm

ORP: 45.5 mV DO: 0.40 mg/L

TURBIDITY: 3.91 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 24.17 °C OTHER:

COLOR: clear ODOR: none

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DU-

COMMENTS: FBLK - WMS - FGD - 22302 collected @ 0900

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
0833	85	5.01	463.17	76.0	0.65	6.52	24.17	9.67	INITIAL
0838	|	5.15	457.65	59.1	0.37	5.89	24.07	9.67	|
0843	|	5.24	454.93	50.3	0.41	4.57	24.04	9.67	|
0848	|	5.29	453.71	47.6	0.41	4.08	24.15	9.67	|
0853	|	5.32	453.15	45.5	0.40	3.91	24.17	9.67	1.1
post 0905	|	—	—	—	—	4.95	—	↓	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **0.1** COND.: +/- **3 %** ORP: +/- D.O.: +/- TURB: +/- **10 %** or </= **5** TEMP.: +/-

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	250 mL	PLASTIC	B	☐ Y ☑ N					☐ Y ☐ N
2	250 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
1	125 mL	PLASTIC	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Williams Station	MODEL: AQUA TROLL 400	SAMPLER: JY / JB
PROJECT NO.:	416559.0006.0000	SERIAL #: 851425	DATE: 9/19/2022

PH CALIBRATION CHECK

	pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME
pre	6.72 / 7.00	9.53 / 10.00	☐ WITHIN RANGE	1356
pre	/	4.53 / 4.00	☐ WITHIN RANGE	1400
post	6.98 / 7.00	10.01 / 10.00	☒ WITHIN RANGE	1358
post	/	3.99 / 4.00	☒ WITHIN RANGE	1404

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
4431.3 / 4490	26.44	☐ WITHIN RANGE	1405
4490.02 / 4490	26.61	☒ WITHIN RANGE	1406
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
212.1 / 228	26.07	☐ WITHIN RANGE	1407
227.9 / 228	26.05	☒ WITHIN RANGE	1409
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = 762.02 mmHg	☒ WITHIN RANGE	1352
Temp. = 27.96 °C	☐ WITHIN RANGE	
Measured = 7.83 mg/L	☐ WITHIN RANGE	
Calculated = 7.8 mg/L	☐ WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	(LOT #): 21320048 (1.00) NTU (EXP. DATE): 04/2023 POST-CAL. READING / STANDARD	CAL. RANGE	TIME
0.03 / 0.00	0.01 / 0.00	☒ WITHIN RANGE	1412
2.62 / 1.00	0.91 / 1.00	☐ WITHIN RANGE	1416
7.99 / 10.00	10.02 / 10.00	☒ WITHIN RANGE	1415
/	/	☐ WITHIN RANGE	

COMMENTS

☑ AUTOCAL SOLUTION (LOT #): 21470032 (EXP. DATE): 04/2022

☐ STANDARD SOLUTION (S) — LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK

CALIBRATED PARAMETERS	CALIBRATION RANGES (1)	
☑	pH	pH: +/- 0.2 S.U.
☑	COND	COND: +/- 1% OF CAL. STANDARD
☐	ORP	ORP: +/- 25 mV
☐	D.O.	D.O.: VARIES
☐	TURB	TURB: +/- 5% OF CAL. STANDARD
☐	_____	(1) CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
☐	_____	

NOTES

LaMotte 2020we turbidimeter

Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

Jacob Bradley — SIGNED — 9-23-22 — DATE

Jacob Bradley — CHECKED BY — 9-23-22 — DATE

R. Mayer 9/23/2022

REVISED 06/2011

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Williams Station	MODEL: AQUA TROLL 400	SAMPLER: (JY) / JB
PROJECT NO.:	416559.0006.0000	SERIAL #: 409268	DATE: 9/19/22

PH CALIBRATION CHECK

pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME
6.69 / 7.00	6.99 / 7.00	☒ WITHIN RANGE	1442
9.69 / 10.00	9.99 / 10.00	☒ WITHIN RANGE	1444
4.31 / 4.00	4.00 / 4.00	☒ WITHIN RANGE	1447
/	/	☐ WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022 PRE-CAL. READING / STANDARD	TEMPERATURE @ 25°C (°CELSIUS)	CAL. RANGE	TIME
3923.9 / 4490 µM/cm	26.95	☐ WITHIN RANGE	
4460.2 / 4490 µM/cm	27.00	☒ WITHIN RANGE	1448
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
212.0 / 228	26.95	☐ WITHIN RANGE	
226.3 / 228	26.97	☒ WITHIN RANGE	1449
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = 762.19 mmHg	☒ WITHIN RANGE	1439
Temp. = 28.67°C	☐ WITHIN RANGE	
Measured = 7.74 mg/L	☐ WITHIN RANGE	
Calculated = 7.7 mg/L	☐ WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	(LOT #): 21320048 (1.00) NTU (EXP. DATE): 04/2023 POST-CAL. READING / STANDARD	CAL. RANGE	TIME
-0.01 / 0.00	/	☒ WITHIN RANGE	1450
10.01 / 10.00	/	☒ WITHIN RANGE	1453
/	/	☐ WITHIN RANGE	
/	/	☐ WITHIN RANGE	

COMMENTS

☑ AUTOCAL SOLUTION (LOT #): 21470032 (EXP. DATE): 04/2022

☐ STANDARD SOLUTION (S) — LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK

CALIBRATED PARAMETERS		CALIBRATION RANGES (1)	
☑	pH	pH:	+/- 0.2 S.U.
☑	COND	COND:	+/- 1% OF CAL. STANDARD
☐	ORP	ORP:	+/- 25 mV
☐	D.O.	D.O.:	VARIES
☐	TURB	TURB:	+/- 5% OF CAL. STANDARD
☐	_____	(1) CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER	
☐	_____		

NOTES

LaMotte 2020we turbidimeter

Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

SIGNED _____ DATE 9/19/22

CHECKED BY _____ DATE 9.23-22

TRC

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Williams Station	MODEL: AQUA TROLL 400	SAMPLER: JY / JB
PROJECT NO.:	416559.0006.0000	SERIAL #: 909268	DATE: 9/20/22

PH CALIBRATION CHECK

pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME
6.92 / 7.00	/	☒ WITHIN RANGE	830
9.77 / 10.00	9.98 / 10.00	☒ WITHIN RANGE	832
4.29 / 4.00	4.02 / 4.00	☒ WITHIN RANGE	834
/	/	☐ WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022 PRE-CAL. READING / STANDARD	TEMPERATURE @25°C (°CELSIUS)	CAL. RANGE	TIME
4379.1 / 4490	24.72	☐ WITHIN RANGE	
4470.3 / 4490	24.74	☒ WITHIN RANGE	835
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
229.2 / 228	24.83	☒ WITHIN RANGE	837
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = 763.00 mmHg	☒ WITHIN RANGE	828
Temp. = 24.11°C	☐ WITHIN RANGE	
Measured = 8.51 mg/L	☐ WITHIN RANGE	
Calculated = 7.5 8.5 mg/L	☐ WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	(LOT #): 21320048 (1.00) NTU (EXP. DATE): 04/2023 POST-CAL. READING / STANDARD	CAL. RANGE	TIME
-0.02 / 0.00	/	☒ WITHIN RANGE	843
1.09 / 1.00	/	☒ WITHIN RANGE	844
9.91 / 10.00	/	☒ WITHIN RANGE	845
/	/	☐ WITHIN RANGE	

COMMENTS

☑ AUTOCAL SOLUTION (LOT #): 21470032 (EXP. DATE): 04/2022

☐ STANDARD SOLUTION (S) — LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK

CALIBRATED PARAMETERS		CALIBRATION RANGES (1)	
☑	pH	pH:	+/- 0.2 S.U.
☑	COND	COND:	+/- 1% OF CAL. STANDARD
☐	ORP	ORP:	+/- 25 mV
☐	D.O.	D.O.:	VARIES
☐	TURB	TURB:	+/- 5% OF CAL. STANDARD
☐	_____	(1) CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER	
☐	_____		

NOTES

LaMotte 2020we turbidimeter

Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

SIGNED [signature] 9/20/22 DATE

CHECKED BY [signature] 9-23-22 DATE

REVISED 06/2011

TRC

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Williams Station	MODEL: AQUA TROLL 400	SAMPLER: JY / (JB)
PROJECT NO.:	416559.0006.0000	SERIAL #: 851425	DATE: 9/20/2022

PH CALIBRATION CHECK

pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME
6.96 / 7.00	9.18 / 10.00	☐ WITHIN RANGE	0839
/	4.65 / 4.00	☐ WITHIN RANGE	0842
post 6.99 / 7.00	10.02 / 10.00	☒ WITHIN RANGE	0841
post /	3.98 / 4.00	☒ WITHIN RANGE	0843

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
4475 / 4490	24.05	☐ WITHIN RANGE	0845
post 4488 / 4490	24.08	☒ WITHIN RANGE	0847
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
219.1 / 228	24.00	☐ WITHIN RANGE	0849
post 229.8 / 228	24.03	☒ WITHIN RANGE	0850
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = 762.33 mmHg	☒ WITHIN RANGE	0836
Temp. = 23.56°C	☐ WITHIN RANGE	
Measured = 8.65 mg/L	☐ WITHIN RANGE	
Calculated = 8.6 mg/L	☐ WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	(LOT #): 21320048 (1.00) NTU (EXP. DATE): 04/2023 POST-CAL. READING / STANDARD	CAL. RANGE	TIME
0.001 0.00	0.00 / 0.00	☒ WITHIN RANGE	0830
1.64 / 1.00	1.62 / 1.00	☐ WITHIN RANGE	0832
7.40 / 10.00	10.02 / 10.00	☒ WITHIN RANGE	0834
/	/	☐ WITHIN RANGE	

COMMENTS

☑ AUTOCAL SOLUTION (LOT #): 21470032 (EXP. DATE): 04/2022	☐ STANDARD SOLUTION (S) LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
CALIBRATED PARAMETERS	CALIBRATION RANGES (1)
☑ pH	pH: +/- 0.2 S.U.
☑ COND	COND: +/- 1% OF CAL. STANDARD
☐ ORP	ORP: +/- 25 mV
☐ D.O.	D.O.: VARIES
☐ TURB	TURB: +/- 5% OF CAL. STANDARD
☐ _____	(1) CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
☐ _____	

NOTES

LaMotte 2020we turbidimeter

Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

Jacob Bradley — SIGNED — 9-22-22 DATE

Jacob Bradley — CHECKED BY — 9-23-22 DATE

R. Mayer

9/23/2022

REVISED 06/2011

TRC

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Williams Station	MODEL: AQUA TROLL 400	SAMPLER: (JY) / JB
PROJECT NO.:	416559.0006.0000	SERIAL #: 909268	DATE: 9/21/22

PH CALIBRATION CHECK

pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME
6.96 / 7.00	/	[X] WITHIN RANGE	832
9.77 / 10.00	9.99 / 10.00	[X] WITHIN RANGE	834
4.37 / 4.00	4.02 / 4.00	[X] WITHIN RANGE	837
/	/	[ ] WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022 PRE-CAL. READING / STANDARD	TEMPERATURE @25°C (°CELSIUS)	CAL. RANGE	TIME
4335.8 / 4490	23.51	[ ] WITHIN RANGE	
4488.8 / 4490	23.48	[X] WITHIN RANGE	839
/		[ ] WITHIN RANGE	
/		[ ] WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
231.6 / 228	23.43	[ ] WITHIN RANGE	
226.2 / 228	23.46	[X] WITHIN RANGE	840
/		[ ] WITHIN RANGE	
/		[ ] WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = 762.45 mmHg	[X] WITHIN RANGE	830
Temp. = 23.73°C	[ ] WITHIN RANGE	
Measured = 8.63 mg/L	[ ] WITHIN RANGE	
Calculated = 8.6 mg/L	[ ] WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	(LOT #): 21320048 (1.00) NTU (EXP. DATE): 04/2023 POST-CAL. READING / STANDARD	CAL. RANGE	TIME
-0.02 / 0.00	/	[X] WITHIN RANGE	841
0.94 / 1.00	/	[X] WITHIN RANGE	842
9.87 / 10.00	/	[X] WITHIN RANGE	842
/	/	[ ] WITHIN RANGE	

COMMENTS

[✓] AUTOCAL SOLUTION (LOT #): 21470032 (EXP. DATE): 04/2022

[ ] STANDARD SOLUTION (S) — LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK

CALIBRATED PARAMETERS		CALIBRATION RANGES (1)	
[✓]	pH	pH:	+/- 0.2 S.U.
[✓]	COND	COND:	+/- 1% OF CAL. STANDARD
[ ]	ORP	ORP:	+/- 25 mV
[ ]	D.O.	D.O.:	VARIES
[ ]	TURB	TURB:	+/- 5% OF CAL. STANDARD
[ ]	_____	(1) CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER	
[ ]	_____		

NOTES

LaMotte 2020we turbidimeter

Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

SIGNED _____ 9/21/22 DATE

CHECKED BY _____ 9-23-22 DATE

REVISED 06/2011

TRC

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Williams Station	MODEL: AQUA TROLL 400	SAMPLER: JY / JB
PROJECT NO.:	416559.0006.0000	SERIAL #: 851425	DATE: 9/21/22

PH CALIBRATION CHECK

pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME
6.86 / 7.00	9.45 / 10.00	☐ WITHIN RANGE	0812
/	4.73 / 4.00	☐ WITHIN RANGE	0820
post 6.99 / 7.00	10.02 / 10.00	☒ WITHIN RANGE	0819
post /	3.98 / 4.00	☒ WITHIN RANGE	0823

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
4368 / 4490	25.04	☐ WITHIN RANGE	0825
4491 / 4490	25.02	☒ WITHIN RANGE	0826
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
238.1 / 228	24.94	☐ WITHIN RANGE	0827
229.1 / 228	24.98	☒ WITHIN RANGE	0828
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = 761.66 mm Hg	☒ WITHIN RANGE	0808
Temp. = 24.17 °C	☐ WITHIN RANGE	
Measured = 8.41 mg/L	☐ WITHIN RANGE	
Calculated = 8.4 mg/L	☐ WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	(LOT #): 21320048 (1.00) NTU (EXP. DATE): 04/2023 POST-CAL. READING / STANDARD	CAL. RANGE	TIME
0.01 / 0.00	0.01 / 0.00	☒ WITHIN RANGE	0831
1.65 / 1.00	1.58 / 1.00	☐ WITHIN RANGE	0833
7.49 / 10.00	10.02 / 10.00	☒ WITHIN RANGE	0832
/	/	☐ WITHIN RANGE	

COMMENTS

☑ AUTOCAL SOLUTION (LOT #): 21470032 (EXP. DATE): 04/2022

☐ STANDARD SOLUTION (S) — LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK

CALIBRATED PARAMETERS		CALIBRATION RANGES [1]	
☑	pH	pH:	+/- 0.2 S.U.
☑	COND	COND:	+/- 1% OF CAL. STANDARD
☐	ORP	ORP:	+/- 25 mV
☐	D.O.	D.O.:	VARIES
☐	TURB	TURB:	+/- 5% OF CAL. STANDARD
☐	_____	[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER	
☐	_____		

NOTES

LaMotte 2020we turbidimeter

Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

Jacob Bradley — SIGNED — 9-23-22 — DATE

Jacob Bradley — CHECKED BY R. Mayer — 9-23-22 — DATE 9/23/2022

REVISED 06/2011

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

October 05, 2022

Kelly Hicks
Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, Virginia 23219

Re: CCR Groundwater Monitoring - Level 1 Package
Work Order: 594158

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 22, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1648.

Sincerely,

Meredith Boddiford

Meredith Boddiford
Project Manager

Purchase Order: 50149867
Chain of Custody: 20220920
Enclosures

Table of Contents

Case Narrative

Receipt Narrative
for
Dominion Energy (50149867)
SDG: 594158

October 05, 2022

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on September 22, 2022 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

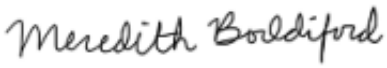
Sample Identification: The laboratory received the following samples:

Laboratory ID	Client ID
594158001	MW-FGD-16-2022Q3
594158002	MW-FGD-17-2022Q3
594158003	MW-FGD-18-2022Q3
594158004	MW-FGD-19-2022Q3
594158005	MW-FGD-19D-2022Q3
594158006	MW-FGD-20AR-2022Q3
594158007	MW-FGD-21-2022Q3
594158008	FBLK-WMS-FGD-22301
594158009	FBLK-WMS-FGD-22302
594158010	DU-WMS-FGD-22301

Case Narrative:

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry and Metals.



Meredith Boddiford
Project Manager

Chain of Custody and Supporting Documentation

Page 5 of 59
SDG: 594158

Page: 1 of 1
Project # 416559.6.0.6.2
GEL Quote #:
COC Number (1): 20220920
PO Number: PO 50149867

594158

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: 207139 **GEL Project Manager: Meredith Boddiford**

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Dominion Energy Phone # 803-258-1528
Project/Site Name: Williams Station New FGD CCR 2022Q3 Fax #
Address: Goose Creek, South Carolina
Collected By: J. Yonts / J. Bradley Send Results To: AReed@envstd.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	TDS-SM2540C	Cl, Fl, SO4-EPA 300.0	NI Total APP III Metals	<-- Preservative Type (6)
MW-FGD-16-2022Q3 ms/msd	9/20/2022	1646	N	N	GW	N		6	X	X	X	EPA 200.7 - B, Ca
MW-FGD-17-2022Q3	9/19/2022	1700	N	N	GW	N		3	X	X	X	
MW-FGD-18-2022Q3	9/19/2022	1550	N	N	GW	N		3	X	X	X	
MW-FGD-19-2022Q3	9/19/2022	1658	N	N	GW	N		3	X	X	X	
MW-FGD-19D-2022Q3	9/19/2022	1558	N	N	GW	N		3	X	X	X	
MW-FGD-20AR-2022Q3	9/20/2022	1347	N	N	GW	N		3	X	X	X	see attached work
MW-FGD-21-2022Q3	9/21/2022	0853	N	N	GW	N		3	X	X	X	order for details
FBLK-WMS-FGD-22301	9/19/2022	1720	FB	N	AQ	N		3	X	X	X	
FBLK-WMS-FGD-22302	9/21/2022	0900	FB	N	AQ	N		3	X	X	X	
DU-WMS-FGD-22301	9/19/2022	—	FD	N	GW	N		3	X	X	X	

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 Jacob Bradley	9/22/22	1348	1	9/22/22	1345
2			2		
3			3		

TAT Requested: Normal: X Rush: ____ Specify: ____

Fax Results: [ ] Yes [X] No
Select Deliverable: [ ] C of A [ ] QC Summary [X] level 1 [ ] Level 2 [ ] Level 3 [ ] Level 4
Additional Remarks:
For Lab Receiving Use Only: *Custody Seal Intact?* [ ] Yes [ ] No ***Cooler Temp:*** 3.5 °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

594154, MB

Client: DMNN	SDG/AR/COC/Work Order: 594158, 594163, 594149, 594160, 594161
Received By: SD	Date Received: 9-22-22
Enter one tracking number per line below. Enter courier if applicable and no tracking available.	IR temperature gun # B2 Daily Calibration performed? Y/N
	Uncorrected temperature readings are to the 0.1 degree with final recorded tepmeratures rounded to the 0.5 degree. Provide individual container details when a cooler requiring 0 </=6oC is identified as out of specification.
WMSFGDCCRASD	Uncorrected Temp: 2.1 IR Correction Factor: +/- 0.0 Final Recorded Temp: 2.0 Within 0.0-6.0C? Y/N
WMSS2CCRLFASD	Uncorrected Temp: 1.2 IR Correction Factor: +/- 0.0 Final Recorded Temp: 1.0 Within 0.0-6.0C? Y/N
WMS S2 NPDES	Uncorrected Temp: 4.9 IR Correction Factor: +/- 0.0 Final Recorded Temp: 5.0 Within 0.0-6.0C? Y/N
WMS FGD NPDES	Uncorrected Temp: 3.5 IR Correction Factor: +/- 0.0 Final Recorded Temp: 3.5 Within 0.0-6.0C? Y/N
MWS FGD CCR	Uncorrected Temp: IR Correction Factor: +/- Final Recorded Temp: Within 0.0-6.0C? Y/N
	Uncorrected Temp: IR Correction Factor: +/- Final Recorded Temp: Within 0.0-6.0C? Y/N

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		X	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		X	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	X			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
4	Samples requiring cold preservation were unpacked directly into cold storage?	X			Uncorrected Temp: Correction Factor: +/- Final Recorded Temp: Within 0.0-6.0C? Y/N NA Response = Samples are for radiochemistry testing only
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's and Containers Affected: If Preservative added, Lot#:
6	Do any samples require Volatile Analysis?			X	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
7	Samples received within holding time?	X			ID's and tests affected:
8	Sample ID's on COC match ID's on bottles?	X			ID's and containers affected:
9	Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
10	Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
11	Are sample containers identifiable as GEL provided by use of GEL labels?	X			
12	COC form is properly signed in relinquished/received sections?	X			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AD Date 9/23/22 Page ___ of ___

GL-CHL-SR-001A Rev 1

Laboratory Certifications

List of current GEL Certifications as of 05 October 2022

State	Certification
Alabama	42200
Alaska	17−018
Alaska Drinking Water	SC00012
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M−SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122023−3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	2022−137
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−22−20
Utah NELAP	SC000122021−36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
Dominion Energy
SDG #: 594158

Product: Determination of Metals by ICP-MS
Analytical Method: EPA 200.8 SC_NPDES
Analytical Procedure: GL-MA-E-014 REV# 35
Analytical Batch: 2320496

Preparation Method: EPA 200.2
Preparation Procedure: GL-MA-E-016 REV# 18
Preparation Batch: 2320495

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
594158001	MW-FGD-16-2022Q3
594158002	MW-FGD-17-2022Q3
594158003	MW-FGD-18-2022Q3
594158004	MW-FGD-19-2022Q3
594158005	MW-FGD-19D-2022Q3
594158006	MW-FGD-20AR-2022Q3
594158007	MW-FGD-21-2022Q3
594158008	FBLK-WMS-FGD-22301
594158009	FBLK-WMS-FGD-22302
594158010	DU-WMS-FGD-22301
1205199149	Method Blank (MB)**ICP-MS**
1205199150	Laboratory Control Sample (LCS)
1205199153	594158001(MW-FGD-16-2022Q3L) Serial Dilution (SD)
1205199151	594158001(MW-FGD-16-2022Q3D) Sample Duplicate (DUP)
1205199152	594158001(MW-FGD-16-2022Q3S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 594158002 (MW-FGD-17-2022Q3), 594158003 (MW-FGD-18-2022Q3), 594158004 (MW-FGD-19-2022Q3), 594158005 (MW-FGD-19D-2022Q3), 594158006 (MW-FGD-20AR-2022Q3) and 594158010 (DU-WMS-FGD-22301) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	594158					
	002	**003**	**004**	**005**	**006**	**010**
Boron	5X	50X	5X	10X	10X	50X
Calcium	5X	50X	5X	10X	10X	50X

Miscellaneous Information

Additional Comments

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMNN001 Dominion Energy (50149867)

Client SDG: 594158 GEL Work Order: 594158

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
B Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature:  **Name: Alan Stanley**

Date: 03 OCT 2022 **Title: Team Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158001 **BASIS:** As Received **DATE COLLECTED** 20−SEP−22

CLIENT ID: MW−FGD−16−2022Q3 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	51.4	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 12:59	220929−1	2320496
7440−70−2	Calcium	15100	ug/L		30.0	100	100	1	MS	PRB	09/29/22 12:59	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158002 **BASIS:** As Received **DATE COLLECTED** 19−SEP−22

CLIENT ID: MW−FGD−17−2022Q3 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	256	ug/L		20.0	75.0	75.0	5	MS	PRB	09/29/22 13:08	220929−1	2320496
7440−70−2	Calcium	151000	ug/L		150	500	500	5	MS	PRB	09/29/22 13:08	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158003 **BASIS:** As Received **DATE COLLECTED** 19−SEP−22

CLIENT ID: MW−FGD−18−2022Q3 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	6980	ug/L		200	750	750	50	MS	PRB	09/29/22 13:10	220929−1	2320496
7440−70−2	Calcium	391000	ug/L		1500	5000	5000	50	MS	PRB	09/29/22 13:10	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158004 **BASIS:** As Received **DATE COLLECTED** 19−SEP−22

CLIENT ID: MW−FGD−19−2022Q3 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	172	ug/L		20.0	75.0	75.0	5	MS	PRB	09/29/22 13:12	220929−1	2320496
7440−70−2	Calcium	163000	ug/L		150	500	500	5	MS	PRB	09/29/22 13:12	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158005 **BASIS:** As Received **DATE COLLECTED** 19−SEP−22

CLIENT ID: MW−FGD−19D−2022Q3 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	1610	ug/L		40.0	150	150	10	MS	PRB	09/29/22 13:18	220929−1	2320496
7440−70−2	Calcium	112000	ug/L		300	1000	1000	10	MS	PRB	09/29/22 13:18	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158006 **BASIS:** As Received **DATE COLLECTED** 20−SEP−22

CLIENT ID: MW−FGD−20AR−2022Q3 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	1710	ug/L		40.0	150	150	10	MS	PRB	09/29/22 13:20	220929−1	2320496
7440−70−2	Calcium	172000	ug/L		300	1000	1000	10	MS	PRB	09/29/22 13:20	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158007 **BASIS:** As Received **DATE COLLECTED** 21−SEP−22

CLIENT ID: MW−FGD−21−2022Q3 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	32.8	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 13:21	220929−1	2320496
7440−70−2	Calcium	45400	ug/L		30.0	100	100	1	MS	PRB	09/29/22 13:21	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158008 **BASIS:** As Received **DATE COLLECTED** 19−SEP−22

CLIENT ID: FBLK−WMS−FGD−22301 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	4.60	ug/L	J	4.00	15.0	15.0	1	MS	PRB	09/29/22 13:23	220929−1	2320496
7440−70−2	Calcium	85.0	ug/L	J	30.0	100	100	1	MS	PRB	09/29/22 13:23	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158009 **BASIS:** As Received **DATE COLLECTED** 21−SEP−22

CLIENT ID: FBLK−WMS−FGD−22302 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	4.24	ug/L	J	4.00	15.0	15.0	1	MS	PRB	09/29/22 13:25	220929−1	2320496
7440−70−2	Calcium	142	ug/L		30.0	100	100	1	MS	PRB	09/29/22 13:25	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594158 **CONTRACT:** DMNN00101 **METHOD TYPE:** EPA

SAMPLE ID: 594158010 **BASIS:** As Received **DATE COLLECTED** 19−SEP−22

CLIENT ID: DU−WMS−FGD−22301 **LEVEL:** Low **DATE RECEIVED** 22−SEP−22

MATRIX: GW **%SOLIDS:** 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440−42−8	Boron	6930	ug/L		200	750	750	50	MS	PRB	09/29/22 13:27	220929−1	2320496
7440−70−2	Calcium	391000	ug/L		1500	5000	5000	50	MS	PRB	09/29/22 13:27	220929−1	2320496

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320496	2320495	EPA 200.2	50	mL	50	mL	09/26/22	EM2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 594158

Contract: DMNN00101 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Boron	103	ug/L	100	ug/L	103	90.0 − 110.0	MS	29−SEP−22 11:34	220929−1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	29−SEP−22 11:34	220929−1
CCV01										
	Boron	99	ug/L	100	ug/L	99	90.0 − 110.0	MS	29−SEP−22 11:43	220929−1
	Calcium	5070	ug/L	5000	ug/L	101.5	90.0 − 110.0	MS	29−SEP−22 11:43	220929−1
CCV02										
	Boron	101	ug/L	100	ug/L	100.8	90.0 − 110.0	MS	29−SEP−22 11:49	220929−1
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	MS	29−SEP−22 11:49	220929−1
CCV03										
	Boron	99.6	ug/L	100	ug/L	99.6	90.0 − 110.0	MS	29−SEP−22 12:49	220929−1
	Calcium	5060	ug/L	5000	ug/L	101.2	90.0 − 110.0	MS	29−SEP−22 12:49	220929−1
CCV04										
	Boron	104	ug/L	100	ug/L	104	90.0 − 110.0	MS	29−SEP−22 13:14	220929−1
	Calcium	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	MS	29−SEP−22 13:14	220929−1
CCV05										
	Boron	101	ug/L	100	ug/L	100.9	90.0 − 110.0	MS	29−SEP−22 13:33	220929−1
	Calcium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	MS	29−SEP−22 13:33	220929−1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 594158

Contract: DMNN00101 **Lab Code:** GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Boron	18.1	ug/L	15	ug/L	120.8	70.0 − 130.0	MS	29−SEP−22 11:37	220929−1
	Calcium	220	ug/L	200	ug/L	110.2	70.0 − 130.0	MS	29−SEP−22 11:37	220929−1
CRDL02										
	Boron	17.6	ug/L	15	ug/L	117.2	70.0 − 130.0	MS	29−SEP−22 12:51	220929−1
	Calcium	219	ug/L	200	ug/L	109.5	70.0 − 130.0	MS	29−SEP−22 12:51	220929−1
CRDL03										
	Boron	18.7	ug/L	15	ug/L	124.6	70.0 − 130.0	MS	29−SEP−22 13:35	220929−1
	Calcium	218	ug/L	200	ug/L	108.8	70.0 − 130.0	MS	29−SEP−22 13:35	220929−1

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 594158

Contract: DMNN00101

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Boron	4.63	+/−7.5	B	4.0	15.0	LIQ	MS	29−SEP−22 11:35	220929−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	29−SEP−22 11:35	220929−1
CCB01										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	29−SEP−22 11:45	220929−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	29−SEP−22 11:45	220929−1
CCB02										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	29−SEP−22 11:51	220929−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	29−SEP−22 11:51	220929−1
CCB03										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	29−SEP−22 12:53	220929−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	29−SEP−22 12:53	220929−1
CCB04										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	29−SEP−22 13:16	220929−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	29−SEP−22 13:16	220929−1
CCB05										
	Boron	4.0	+/−7.5	U	4.0	15.0	LIQ	MS	29−SEP−22 13:37	220929−1
	Calcium	30.0	+/−50	U	30.0	100	LIQ	MS	29−SEP−22 13:37	220929−1

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 594158
Contract: DMNN00101
Matrix: GW

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1205199149								
	Boron	4.00	ug/L	+/−7.5	U	MS	4.00	15.0
	Calcium	30.0	ug/L	+/−50	U	MS	30.0	100

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
−4−
Interference Check Sample

SDG No: 594158

Contract: DMNN00101 **Lab Code:** GEL

Instrument: ICPMS15

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Boron	3.83	ug/L					29−SEP−22 11:39	220929−1
	Calcium	94500	ug/L	100000	ug/L	94.5	80.0 − 120.0	29−SEP−22 11:39	220929−1
ICSAB01									
	Boron	20.9	ug/L	22.06	ug/L	94.7	80.0 − 120.0	29−SEP−22 11:41	220929−1
	Calcium	95400	ug/L	100000	ug/L	95.4	80.0 − 120.0	29−SEP−22 11:41	220929−1
ICSA02									
	Boron	3.46	ug/L					29−SEP−22 12:45	220929−1
	Calcium	94400	ug/L	100000	ug/L	94.4	80.0 − 120.0	29−SEP−22 12:45	220929−1
ICSAB02									
	Boron	21.2	ug/L	22.06	ug/L	95.9	80.0 − 120.0	29−SEP−22 12:47	220929−1
	Calcium	94700	ug/L	100000	ug/L	94.7	80.0 − 120.0	29−SEP−22 12:47	220929−1
ICSA03									
	Boron	6.26	ug/L					29−SEP−22 13:29	220929−1
	Calcium	94100	ug/L	100000	ug/L	94.1	80.0 − 120.0	29−SEP−22 13:29	220929−1
ICSAB03									
	Boron	22.6	ug/L	22.06	ug/L	102	80.0 − 120.0	29−SEP−22 13:31	220929−1
	Calcium	95600	ug/L	100000	ug/L	95.6	80.0 − 120.0	29−SEP−22 13:31	220929−1

METALS
−5a−

Matrix Spike Summary

SDG NO. 594158 **Client ID** MW−FGD−16−2022Q3S

Contract: DMNN00101 **Level:** Low

Matrix: GROUND WATER **% Solids:**

Sample ID: 594158001 **Spike ID:** 1205199152

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Boron	ug/L	75−125	148		51.4		100	96.6		MS
Calcium	ug/L		17300		15100		2000	111	N/A	MS

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

Metals
−6−
Duplicate Sample Summary

SDG No.: 594158 **Lab Code:** GEL

Contract: DMNN00101 **Client ID:** MW−FGD−16−2022Q3D

Matrix: GROUND WATER **Level:** Low

Sample ID: 594158001 **Duplicate ID:** 1205199151 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Boron	ug/L	+/−30	51.4		49.6		3.65		MS
Calcium	ug/L	+/−20%	15100		15200		.521		MS

***Analytical Methods:**
MS EPA 200.8 SC_NPDES

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 594158

Contract: DMNN00101

Aqueous LCS Source: Enviromental Express **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1205199150								
	Calcium	ug/L	2000	2160		108	85−115	MS
	Boron	ug/L	100	102		102	85−115	MS

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 594158 **Client ID** MW−FGD−16−2022Q3L

Contract: DMNN00101

Matrix: LIQUID **Level:** Low

Sample ID: 594158001 **Serial Dilution ID:** 1205199153

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Boron	51.4		66.8	B	29.867			MS
Calcium	15100		14400		4.505		10	MS

***Analytical Methods:**

MS **EPA 200.8 SC_NPDES**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 594158 **Method Type:** MS

Contract: DMNN00101 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 2320495							
1205199149	MB for batch 2320495	MB	G	26−SEP−22	50mL	50mL	
1205199150	LCS for batch 2320495	LCS	G	26−SEP−22	50mL	50mL	
1205199152	MW−FGD−16−2022Q3S	MS	G	26−SEP−22	50mL	50mL	
1205199151	MW−FGD−16−2022Q3D	DUP	G	26−SEP−22	50mL	50mL	
594158001	MW−FGD−16−2022Q3	SAMPLE	G	26−SEP−22	50mL	50mL	
594158002	MW−FGD−17−2022Q3	SAMPLE	G	26−SEP−22	50mL	50mL	
594158003	MW−FGD−18−2022Q3	SAMPLE	G	26−SEP−22	50mL	50mL	
594158004	MW−FGD−19−2022Q3	SAMPLE	G	26−SEP−22	50mL	50mL	
594158005	MW−FGD−19D−2022Q3	SAMPLE	G	26−SEP−22	50mL	50mL	
594158006	MW−FGD−20AR−2022Q3	SAMPLE	G	26−SEP−22	50mL	50mL	
594158007	MW−FGD−21−2022Q3	SAMPLE	G	26−SEP−22	50mL	50mL	
594158008	FBLK−WMS−FGD−22301	SAMPLE	G	26−SEP−22	50mL	50mL	
594158009	FBLK−WMS−FGD−22302	SAMPLE	G	26−SEP−22	50mL	50mL	
594158010	DU−WMS−FGD−22301	SAMPLE	G	26−SEP−22	50mL	50mL	

EPA

General Chem Analysis

Case Narrative

General Chemistry
Technical Case Narrative
Dominion Energy
SDG #: 594158

Product: **Ion Chromatography**
Analytical Method: EPA 300.0
Analytical Procedure: GL-GC-E-086 REV# 30
Analytical Batch: 2321486

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
594158001	MW-FGD-16-2022Q3
594158002	MW-FGD-17-2022Q3
594158003	MW-FGD-18-2022Q3
594158004	MW-FGD-19-2022Q3
594158005	MW-FGD-19D-2022Q3
594158006	MW-FGD-20AR-2022Q3
594158007	MW-FGD-21-2022Q3
594158008	FBLK-WMS-FGD-22301
594158009	FBLK-WMS-FGD-22302
594158010	DU-WMS-FGD-22301
1205201215	Method Blank (MB)
1205201216	Laboratory Control Sample (LCS)
1205201217	594149004(GW-19-2022Q3) Sample Duplicate (DUP)
1205201218	594158001(MW-FGD-16-2022Q3) Sample Duplicate (DUP)
1205201219	594149004(GW-19-2022Q3) Post Spike (PS)
1205201220	594158001(MW-FGD-16-2022Q3) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions
The following samples 1205201217 (GW-19-2022Q3DUP), 1205201218 (MW-FGD-16-2022Q3DUP), 1205201219 (GW-19-2022Q3PS), 1205201220 (MW-FGD-16-2022Q3PS), 594158001 (MW-FGD-16-2022Q3), 594158002 (MW-FGD-17-2022Q3), 594158003 (MW-FGD-18-2022Q3), 594158004 (MW-FGD-19-2022Q3), 594158005 (MW-FGD-19D-2022Q3), 594158006 (MW-FGD-20AR-2022Q3), 594158007 (MW-FGD-21-2022Q3) and 594158010 (DU-WMS-FGD-22301) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	594158							
	001	**002**	**003**	**004**	**005**	**006**	**007**	**010**
Chloride	5X	25X	400X	100X	100X	100X	1X	400X
Sulfate	5X	1X	400X	100X	5X	1X	10X	400X

Miscellaneous Information

Manual Integrations
Samples 594158003 (MW-FGD-18-2022Q3) and 594158010 (DU-WMS-FGD-22301) were manually integrated to correctly position the baseline as set in the calibration standards.

Additional Comments
All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

Product: **Solids, Total Dissolved**
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 19
Analytical Batches: 2320549, 2321243 and 2321838

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
594158001	MW-FGD-16-2022Q3
594158002	MW-FGD-17-2022Q3
594158003	MW-FGD-18-2022Q3
594158004	MW-FGD-19-2022Q3
594158005	MW-FGD-19D-2022Q3
594158006	MW-FGD-20AR-2022Q3
594158007	MW-FGD-21-2022Q3
594158008	FBLK-WMS-FGD-22301
594158009	FBLK-WMS-FGD-22302
594158010	DU-WMS-FGD-22301
1205199278	Method Blank (MB)
1205199279	Laboratory Control Sample (LCS)
1205199280	594064010(NonSDG) Sample Duplicate (DUP)
1205199281	594126001(NonSDG) Sample Duplicate (DUP)
1205199282	594149004(GW-19-2022Q3) Sample Duplicate (DUP)
1205199283	594158001(MW-FGD-16-2022Q3) Sample Duplicate (DUP)
1205200682	Method Blank (MB)
1205200683	Laboratory Control Sample (LCS)
1205200685	593965006(NonSDG) Sample Duplicate (DUP)
1205200686	594163006(GW-8-2022Q3) Sample Duplicate (DUP)
1205201660	594016001(NonSDG) Sample Duplicate (DUP)
1205201685	593920002(NonSDG) Sample Duplicate (DUP)
1205201917	Method Blank (MB)
1205201918	Laboratory Control Sample (LCS)
1205201919	593896001(NonSDG) Sample Duplicate (DUP)
1205201920	593969003(NonSDG) Sample Duplicate (DUP)
1205201921	594040002(NonSDG) Sample Duplicate (DUP)
1205201922	594047006(NonSDG) Sample Duplicate (DUP)
1205201923	594161004(MW-LF-21-2022Q3) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Duplicate Relative Percent Difference (RPD) Statement
The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance

limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Total Dissolved Solids	1205201920 (Non SDG 593969003DUP)	9.7* (0%-5%)
	1205201921 (Non SDG 594040002DUP)	5.88* (0%-5%)

Miscellaneous Information

Additional Comments
All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DMNN001 Dominion Energy (50149867)

Client SDG: 594158 GEL Work Order: 594158

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
J Value is estimated
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature:  **Name: Aubrey Kingsbury**

Date: 05 OCT 2022 **Title: Team Leader**

Sample Data Summary

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 5, 2022

Company :	Dominion Energy Services, Inc.
Address :	120 Tredegar Street
	Richmond, Virginia 23219
Contact:	Kelly Hicks
Project:	CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-16-2022Q3	Project:	DMNN00101
Sample ID:	594158001	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	20-SEP-22 16:46		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.330	0.0330	0.100	mg/L		1	HXC1	09/26/22	1920	2321486	1
Chloride		24.5	0.335	1.00	mg/L		5	HXC1	09/27/22	1233	2321486	2
Sulfate		48.9	0.665	2.00	mg/L		5					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		193	2.38	10.0	mg/L			CH6	09/23/22	1526	2320549	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 5, 2022

Company :	Dominion Energy Services, Inc.
Address :	120 Tredegar Street
	Richmond, Virginia 23219
Contact:	Kelly Hicks
Project:	CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-17-2022Q3	Project:	DMNN00101
Sample ID:	594158002	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	19-SEP-22 17:00		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.511	0.0330	0.100	mg/L		1	HXC1	09/26/22	2050	2321486	1
Sulfate		15.9	0.133	0.400	mg/L		1					
Chloride		148	1.68	5.00	mg/L		25	HXC1	09/27/22	1403	2321486	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		948	2.38	10.0	mg/L			CH6	09/23/22	1526	2320549	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 5, 2022

Company :	Dominion Energy Services, Inc.
Address :	120 Tredegar Street
	Richmond, Virginia 23219
Contact:	Kelly Hicks
Project:	CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-18-2022Q3	Project:	DMNN00101
Sample ID:	594158003	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	19-SEP-22 15:50		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.420	0.0330	0.100	mg/L		1	HXC1	09/26/22	2120	2321486	1
Chloride		1750	26.8	80.0	mg/L		400	HXC1	09/27/22	1432	2321486	2
Sulfate		175	53.2	160	mg/L		400					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		3720	2.38	10.0	mg/L			CH6	09/23/22	1526	2320549	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 5, 2022

Company :	Dominion Energy Services, Inc.
Address :	120 Tredegar Street
	Richmond, Virginia 23219
Contact:	Kelly Hicks
Project:	CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-19-2022Q3	Project:	DMNN00101
Sample ID:	594158004	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	19-SEP-22 16:58		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride	J	0.0963	0.0330	0.100	mg/L		1	HXC1	09/26/22	2149	2321486	1
Chloride		704	6.70	20.0	mg/L		100	HXC1	09/27/22	1502	2321486	2
Sulfate		58.2	13.3	40.0	mg/L		100					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		1550	2.38	10.0	mg/L			CH6	09/23/22	1526	2320549	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-19D-2022Q3	Project:	DMNN00101
Sample ID:	594158005	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	19-SEP-22 15:58		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.640	0.0330	0.100	mg/L		1	HXC1	09/26/22	2219	2321486	1
Chloride		600	6.70	20.0	mg/L		100	HXC1	09/27/22	1532	2321486	2
Sulfate		26.4	0.665	2.00	mg/L		5	HXC1	09/27/22	1602	2321486	3
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		1320	2.38	10.0	mg/L			CH6	09/23/22	1526	2320549	4

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 300.0	
4	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 5, 2022

Company :	Dominion Energy Services, Inc.
Address :	120 Tredegar Street
	Richmond, Virginia 23219
Contact:	Kelly Hicks
Project:	CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-FGD-20AR-2022Q3	Project:	DMNN00101
Sample ID:	594158006	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	20-SEP-22 13:47		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.184	0.0330	0.100	mg/L		1	HXC1	09/26/22	2249	2321486	1
Sulfate		10.5	0.133	0.400	mg/L		1					
Chloride		383	6.70	20.0	mg/L		100	HXC1	09/27/22	1632	2321486	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		1270	2.38	10.0	mg/L			CH6	09/23/22	1526	2320549	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-FGD-21-2022Q3
Sample ID: 594158007
Matrix: GW
Collect Date: 21-SEP-22 08:53
Receive Date: 22-SEP-22
Collector: Client

Project: DMNN00101
Client ID: DMNN001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.01	0.0670	0.200	mg/L		1	HXC1	09/26/22	2319	2321486	1
Fluoride	J	0.0470	0.0330	0.100	mg/L		1					
Sulfate		84.8	1.33	4.00	mg/L		10	HXC1	09/27/22	1831	2321486	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		243	2.38	10.0	mg/L			CH6	09/23/22	1526	2320549	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 5, 2022

Company :	Dominion Energy Services, Inc.
Address :	120 Tredegar Street
	Richmond, Virginia 23219
Contact:	Kelly Hicks
Project:	CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	FBLK-WMS-FGD-22301	Project:	DMNN00101
Sample ID:	594158008	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	19-SEP-22 17:20		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	09/26/22	2349	2321486	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/23/22	1526	2320549	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	FBLK-WMS-FGD-22302	Project:	DMNN00101
Sample ID:	594158009	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	21-SEP-22 09:00		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	09/27/22	0148	2321486	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/27/22	1503	2321838	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 5, 2022

Company :	Dominion Energy Services, Inc.
Address :	120 Tredegar Street
	Richmond, Virginia 23219
Contact:	Kelly Hicks
Project:	CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	DU-WMS-FGD-22301	Project:	DMNN00101
Sample ID:	594158010	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	19-SEP-22 12:00		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.411	0.0330	0.100	mg/L		1	HXC1	09/27/22	0218	2321486	1
Chloride		1800	26.8	80.0	mg/L		400	HXC1	09/27/22	1901	2321486	2
Sulfate		177	53.2	160	mg/L		400					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		3790	2.38	10.0	mg/L			CH6	09/26/22	1538	2321243	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

Quality Control Summary

QC Summary

Report Date: October 5, 2022

Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, Virginia

Contact: **Kelly Hicks**

Workorder: **594158**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography										
Batch 2321486										
QC1205201217 594149004 DUP										
Chloride		19.4		19.4	mg/L	0.144		(0%-20%)	HXC1	09/27/22 08:16
Fluoride		0.385		0.388	mg/L	0.957 ^		(+/-.2)		09/26/22 15:51
Sulfate		136		137	mg/L	0.176		(0%-20%)		09/27/22 08:16
QC1205201218 594158001 DUP										
Chloride		24.5		24.4	mg/L	0.0879		(0%-20%)		09/27/22 13:03
Fluoride		0.330		0.326	mg/L	1.16 ^		(+/-.2)		09/26/22 19:50
Sulfate		48.9		48.8	mg/L	0.0235		(0%-20%)		09/27/22 13:03
QC1205201216 LCS										
Chloride	5.00			4.66	mg/L		93.3	(90%-110%)		09/26/22 13:22
Fluoride	2.50			2.46	mg/L		98.5	(90%-110%)		
Sulfate	10.0			9.45	mg/L		94.5	(90%-110%)		
QC1205201215 MB										
Chloride			U	ND	mg/L					09/26/22 12:52
Fluoride			U	ND	mg/L					
Sulfate			U	ND	mg/L					
QC1205201219 594149004 PS										
Chloride	5.00	1.94		6.82	mg/L		97.7	(90%-110%)		09/27/22 08:46

QC Summary

Workorder: **594158**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography										
Batch 2321486										
Fluoride	2.50	0.385		2.83	mg/L		97.8	(90%-110%)	HXC1	09/26/22 16:21
Sulfate	10.0	13.6		24.2	mg/L		106	(90%-110%)		09/27/22 08:46
QC1205201220 594158001 PS										
Chloride	5.00	4.89		10.4	mg/L		109	(90%-110%)		09/27/22 13:33
Fluoride	2.50	0.330		2.78	mg/L		98.1	(90%-110%)		09/26/22 20:20
Sulfate	10.0	9.77		20.2	mg/L		105	(90%-110%)		09/27/22 13:33
Solids Analysis										
Batch 2320549										
QC1205199280 594064010 DUP										
Total Dissolved Solids		3370		3340	mg/L	0.893		(0%-5%)	CH6	09/23/22 15:26
QC1205199281 594126001 DUP										
Total Dissolved Solids		237		226	mg/L	4.75		(0%-5%)		09/23/22 15:26
QC1205199282 594149004 DUP										
Total Dissolved Solids		710		705	mg/L	0.707		(0%-5%)		09/23/22 15:26
QC1205199283 594158001 DUP										
Total Dissolved Solids		193		188	mg/L	2.62		(0%-5%)		09/23/22 15:26
QC1205199279 LCS										
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)		09/23/22 15:26
QC1205199278 MB										
Total Dissolved Solids			U	ND	mg/L					09/23/22 15:26

QC Summary

Workorder: **594158**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Solids Analysis										
Batch 2321243										
QC1205200685 593965006 DUP										
Total Dissolved Solids		248		252	mg/L	1.6		(0%-5%)	CH6	09/26/22 15:38
QC1205200686 594163006 DUP										
Total Dissolved Solids		1430		1420	mg/L	0.422		(0%-5%)		09/26/22 15:38
QC1205201660 594016001 DUP										
Total Dissolved Solids		1860		1870	mg/L	0.537		(0%-5%)		09/26/22 15:38
QC1205201685 593920002 DUP										
Total Dissolved Solids		183		177	mg/L	3.33		(0%-5%)		09/26/22 15:38
QC1205200683 LCS										
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)		09/26/22 15:38
QC1205200682 MB										
Total Dissolved Solids			U	ND	mg/L					09/26/22 15:38
Batch 2321838										
QC1205201919 593896001 DUP										
Total Dissolved Solids		117		120	mg/L	2.53		(0%-5%)	CH6	09/27/22 15:03
QC1205201920 593969003 DUP										
Total Dissolved Solids		227		206	mg/L	9.7*		(0%-5%)		09/27/22 15:03
QC1205201921 594040002 DUP										
Total Dissolved Solids		175		165	mg/L	5.88*		(0%-5%)		09/27/22 15:03
QC1205201922 594047006 DUP										
Total Dissolved Solids		730		734	mg/L	0.546		(0%-5%)		09/27/22 15:03
QC1205201923 594161004 DUP										
Total Dissolved Solids		612		611	mg/L	0.164		(0%-5%)		09/27/22 15:03

QC Summary

Workorder: **594158**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch 2321838											
QC1205201918 LCS											
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)	CH6	09/27/22	15:03
QC1205201917 MB											
Total Dissolved Solids			U	ND	mg/L					09/27/22	15:03

Notes:

The Qualifiers in this report are defined as follows:

<	Result is less than value reported
>	Result is greater than value reported
B	The target analyte was detected in the associated blank.
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
H	Analytical holding time was exceeded
J	See case narrative for an explanation
J	Value is estimated
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
e	5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes
h	Preparation or preservation holding time was exceeded

QC Summary

Workorder: **594158**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the samples collected as part of:

Williams Power Station Groundwater Sampling
Samples Collected between: 9/19/2022 and 9/22/2022

This review was performed with guidance from the associated US EPA data validation guidelines and in accordance with the Quality Assurance Program Plan. These validation guidance documents specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the US EPA, SW-846, and Standard Methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the US EPA, SW-846, and Standard Methods utilized by the laboratory. This QA review was performed on the data associated with Job Number:

594158

The findings offered in this report are based on a review of holding times and preservation, method blank results, field blank results, filter blank results, equipment blank results, tubing blank results, matrix spike/matrix spike duplicate recoveries and precision, laboratory control sample/laboratory control sample duplicate recoveries and precision, laboratory and field duplicate precision, total and dissolved results comparisons, and/or positive results between the method detection limit and quantitation limit.

The following results were qualified based on the data verification effort:

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Uncertainty	Unit
MW-FGD-19-2022Q3	MW-FGD-19	N	EPA 300.0	Fluoride	N	0.0963	J	RL	0.0330	0.100		mg/L
MW-FGD-21-2022Q3	MW-FGD-21	N	EPA 300.0	Fluoride	N	0.0470	J	RL	0.0330	0.100		mg/L
FBLK-WMS-FGD-22301	Field Blank	FB	EPA 200.8	Boron	T	4.60	J	RL	4.00	15.0		ug/L
FBLK-WMS-FGD-22301	Field Blank	FB	EPA 200.8	Calcium	T	85.0	J	RL	30.0	100		ug/L
FBLK-WMS-FGD-22302	Field Blank	FB	EPA 200.8	Boron	T	4.24	J	RL	4.00	15.0		ug/L

Data Qualifiers	
U	The analyte was not detected above the level of the sample reporting limit.
J	Quantitation is approximate due to limitations identified during data validation.
J+	The result is an estimated quantity; the result may be biased high.
J-	The result is an estimated quantity; the result may be biased low.
UJ	The analyte was not detected; the reporting limit is approximate and may be inaccurate or imprecise.
R	Unreliable positive result; analyte may or may not be present in sample.
Reason Codes and Explanations	
BE	Equipment blank contamination.
BF	Field blank contamination.
BL	Laboratory blank contamination.
BN	Negative laboratory blank contamination.
FD	Field duplicate imprecision.
FG	Total versus Dissolved Imprecision.
H	Holding time exceeded.
L	LCS and LCSD recoveries outside of acceptance limits
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
M	MS and MSD recoveries outside of acceptance limits

MP	MS/MSD imprecision.
Q	Chemical Preservation issue.
RL	Reported Results between the MDL and QL.
S	Radium-226+228 flagged due to reporting protocol for combined results
T	Temperature preservation issue.
X	Percent solids < 50%.
Y	Chemical yield outside of acceptance limits
ZZ	Other

Facility: Williams Generating Station
SDG: 594158

Lab Sample ID	594158001
Sys Sample Code	MW-FGD-16-2022Q3
Sample Name	MW-FGD-16-2022Q3
Sample Date	9/20/2022 4:46:00 PM
Location	WMS-MW-FGD-16 / MW-FGD-16
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	51.4				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	15100				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.330				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	24.5				0.335	0.335	1.00	Y	Yes	5	NA
	Sulfate	14808-79-8	N	mg/L	48.9				0.665	0.665	2.00	Y	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	193				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594158002
Sys Sample Code	MW-FGD-17-2022Q3
Sample Name	MW-FGD-17-2022Q3
Sample Date	9/19/2022 5:00:00 PM
Location	WMS-MW-FGD-17 / MW-FGD-17
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	256				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	151000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.511				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	15.9				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	148				1.68	1.68	5.00	Y	Yes	25	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	948				2.38	2.38	10.0	Y	Yes	1	NA

Facility: Williams Generating Station
SDG: 594158

Lab Sample ID	594158003
Sys Sample Code	MW-FGD-18-2022Q3
Sample Name	MW-FGD-18-2022Q3
Sample Date	9/19/2022 3:50:00 PM
Location	WMS-MW-FGD-18 / MW-FGD-18
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	6980				200	200	750	Y	Yes	50	NA
	Calcium	7440-70-2	T	ug/L	391000				1500	1500	5000	Y	Yes	50	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.420				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	1750				26.8	26.8	80.0	Y	Yes	400	NA
	Sulfate	14808-79-8	N	mg/L	175				53.2	53.2	160	Y	Yes	400	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	3720				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594158004
Sys Sample Code	MW-FGD-19-2022Q3
Sample Name	MW-FGD-19-2022Q3
Sample Date	9/19/2022 4:58:00 PM
Location	WMS-MW-FGD-19 / MW-FGD-19
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	172				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	163000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.0963	J	RL		0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	704				6.70	6.70	20.0	Y	Yes	100	NA
	Sulfate	14808-79-8	N	mg/L	58.2				13.3	13.3	40.0	Y	Yes	100	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	1550				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594158005
Sys Sample Code	MW-FGD-19D-2022Q3
Sample Name	MW-FGD-19D-2022Q3
Sample Date	9/19/2022 3:58:00 PM
Location	WMS-MW-FGD-19D / MW-FGD-19D
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	1610				40.0	40.0	150	Y	Yes	10	NA
	Calcium	7440-70-2	T	ug/L	112000				300	300	1000	Y	Yes	10	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.640				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	600				6.70	6.70	20.0	Y	Yes	100	NA
	Sulfate	14808-79-8	N	mg/L	26.4				0.665	0.665	2.00	Y	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	1320				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594158006
Sys Sample Code	MW-FGD-20AR-2022Q3
Sample Name	MW-FGD-20AR-2022Q3
Sample Date	9/20/2022 1:47:00 PM
Location	WMS-MW-FGD-20AR / MW-FGD-20AR
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	1710				40.0	40.0	150	Y	Yes	10	NA
	Calcium	7440-70-2	T	ug/L	172000				300	300	1000	Y	Yes	10	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.184				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	10.5				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	383				6.70	6.70	20.0	Y	Yes	100	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	1270				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594158007
Sys Sample Code	MW-FGD-21-2022Q3
Sample Name	MW-FGD-21-2022Q3
Sample Date	9/21/2022 8:53:00 AM
Location	WMS-MW-FGD-21 / MW-FGD-21
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	32.8				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	45400				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	3.01				0.0670	0.0670	0.200	Y	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.0470	J	RL		0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Sulfate	14808-79-8	N	mg/L	84.8				1.33	1.33	4.00	Y	Yes	10	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	243				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594158008
Sys Sample Code	FBLK-WMS-FGD-22301
Sample Name	FBLK-WMS-FGD-22301
Sample Date	9/19/2022 5:20:00 PM
Location	WMS-FB / Field Blank
Sample Type	FB
Matrix	AQ
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	4.60	J	RL		4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	85.0	J	RL		30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L		U			0.0670	0.0670	0.200	N	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			2.38	2.38	10.0	N	Yes	1	NA

Facility: Williams Generating Station
SDG: 594158

Lab Sample ID	594158009
Sys Sample Code	FBLK-WMS-FGD-22302
Sample Name	FBLK-WMS-FGD-22302
Sample Date	9/21/2022 9:00:00 AM
Location	WMS-FB / Field Blank
Sample Type	FB
Matrix	AQ
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	4.24	J	RL		4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	142				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L		U			0.0670	0.0670	0.200	N	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			2.38	2.38	10.0	N	Yes	1	NA

Lab Sample ID	594158010
Sys Sample Code	DU-WMS-FGD-22301
Sample Name	DU-WMS-FGD-22301
Sample Date	9/19/2022 12:00:00 PM
Location	WMS-MW-FGD-18 / MW-FGD-18
Sample Type	FD
Matrix	GW
Parent Sample	MW-FGD-18-2022Q3

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	6930				200	200	750	Y	Yes	50	NA
	Calcium	7440-70-2	T	ug/L	391000				1500	1500	5000	Y	Yes	50	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.411				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	1800				26.8	26.8	80.0	Y	Yes	400	NA
	Sulfate	14808-79-8	N	mg/L	177				53.2	53.2	160	Y	Yes	400	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	3790				2.38	2.38	10.0	Y	Yes	1	NA

Appendix D
First Semiannual 2022 Detection Monitoring Statistical Evaluation

DOMINION ENERGY SOUTH CAROLINA

WILLIAMS STATION NEW FGD POND

SEMIANNUAL DETECTION MONITORING

BERKELEY COUNTY, SOUTH CAROLINA

CCR GROUNDWATER DETECTION MONITORING STATISTICAL ANALYSIS REPORT

For the

March 2022 Sampling Event

July 2022

Joyce Peterson, P.E.
Senior Environmental Engineer

Richard A. Mayer Jr., P.G.
Project Manager

50 INTERNATIONAL DRIVE, SUITE 150, GREENVILLE, SC 29615, ● 864.281.0030 PHONE ● 864.281.0288 FAX ● WWW.TRCCOMPANIES.COM

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Statistical Analysis Report

Groundwater Sampling

TRC Environmental Corporation (TRC) is providing this Statistically Significant Increases (SSI) notification for the Williams Station New FGD Pond for the initial semiannual detection monitoring event. Samples were collected on March 22nd – 23rd, 2022. The final laboratory analytical data packages for the event were received on April 4th, 2022, and the data validation report was received on April 8th, 2022. This report addresses results from Detection Monitoring wells MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR. Background wells for the New FGD Pond include MW-FGD-16 and MW-FGD-21.

Statistical Analysis

Statistically Significant Level (SSL) exceedances above background concentrations include the following:

- MW-FGD-17: boron, calcium, chloride, pH, sulfate, and total dissolved solids (TDS)
- MW-FGD-18: boron, calcium, chloride, pH, sulfate, and TDS
- MW-FGD-19: boron, calcium, chloride, and TDS
- MW-FGD-19D: boron, calcium, chloride, fluoride, pH, and TDS
- MW-FGD-20AR: boron, calcium, chloride, pH, sulfate, and TDS

The New FGD Pond opened in April 2021 in accordance with the CCR Rule requirements. TRC conducted statistical evaluation of eight baseline groundwater sampling events that were collected from the New FGD Pond monitoring wells between April 28, 2021, and September 23, 2021. The samples were analyzed for the CCR Rule Appendix III and Appendix IV parameters. The data from the baseline events were statically evaluated to determine the background threshold values (BTVs) for Appendix III constituents and groundwater protection standards (GWPS) for Appendix IV constituents. A *Baseline Statistical Evaluation Report* presenting the results of the baseline evaluation was prepared by TRC dated January 2022.

Table 1 presents BTVs calculated based on the background data. **Table 2** presents the data set for the initial detection monitoring event and highlights results that are potential SSIs. An Alternative Source Demonstration (ASD) should be prepared for these potential SSIs.

Table 1
Background Threshold Values

Table 1

Background Threshold Values

Dominion Energy South Carolina

Williams Station New FGD Pond

CONSTITUENT	PERCENT DETECTED	DISTRIBUTION	TREND	BACKGROUND THRESHOLD VALUE	BASIS
Boron (mg/L)	100	Normal	None	0.0667	95% UPL (k = 20)
Calcium (mg/L)	100	Nonnormal	None	41.7	95% USL
Chloride (mg/L)	100	Nonnormal	None	33.3	95% USL
Fluoride (mg/L)	100	Normal	None	0.646	95% UPL (k = 20)
pH (s.u.)	100	Nonnormal	None	4.67 - 5.82	Min - Max result
Sulfate (mg/L	100	Nonnormal	None	89.2	95% USL
TDS (mg/L)	100	Normal	None	329	95% UPL (k = 20)

mg/L = milligrams per liter.

pH expressed in standard units (s.u.).

UPL = upper prediction limit.

USL = upper statistical limit.

Table 2
March 2022 Downgradient Results and Potential SSIs

Table 2

March 2022 Downgradient Results and Potential SSIs

Dominion Energy South Carolina

Williams Station New FGD Pond

WELL	CONSTITUENT / BTV / RESULT (mg/L except as noted)[1]						
	BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
	0.0667	41.7	33.3	0.646	4.67 - 5.82	89.2	329
BACKGROUND WELLS							
MW-FGD-16	0.0390	12.8	29.9	0.300	5.01	41.0	199
MW-FGD-21	0.0229	45.2	3.26	0.0767 J	5.72	94.2	236
DOWNGRADIENT WELLS							
MW-FGD-17	1.250	216	323	0.423	6.16	92.6	1,250
MW-FGD-18	7.240	421	1,950	0.537	6.44	169	3,850
MW-FGD-19	0.194	132	755	0.120	5.60	35.6	1,870
MW-FGD-19D	1.340	105	570	0.659	6.62	19.2	1,270
MW-FGD-20AR	3.430	266	601	0.256	6.47	178	1700

Shaded cells indicate an SSI.

[1] pH expressed in standard units (s.u.).

J Estimated concentration.

Appendix E
Second Semiannual 2022 Detection Monitoring Statistical Evaluation

DOMINION ENERGY SOUTH CAROLINA

WILLIAMS STATION NEW FGD POND

SEMIANNUAL DETECTION MONITORING

BERKELEY COUNTY, SOUTH CAROLINA

CCR GROUNDWATER DETECTION MONITORING STATISTICAL ANALYSIS REPORT

For the

September 2022 Sampling Event

December 2022

Joyce Peterson, P.E.
Senior Environmental Engineer

Richard A. Mayer Jr., P.G.
Project Manager

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Statistical Analysis Report

Groundwater Sampling

TRC Environmental Corporation (TRC) is providing this Statistically Significant Increases (SSI) notification for the Williams Station New FGD Pond for the second semiannual detection monitoring event. Samples were collected on September 19th – 21st, 2022. The final laboratory analytical data packages for the event were received on October 5th, 2022, and the data validation report was received on October 7th, 2022. This report addresses results from Detection Monitoring wells MW-FGD-17, MW-FGD-18, MW-FGD-19, MW-FGD-19D, and MW-FGD-20AR. Background wells for the New FGD Pond include MW-FGD-16 and MW-FGD-21.

Statistical Analysis

Statistically Significant Level (SSL) exceedances above background concentrations include the following:

- MW-FGD-17: boron, calcium, chloride, pH, and total dissolved solids (TDS)
- MW-FGD-18: boron, calcium, chloride, pH, sulfate, and TDS
- MW-FGD-19: boron, calcium, chloride, and TDS
- MW-FGD-19D: boron, calcium, chloride, pH, and TDS
- MW-FGD-20AR: boron, calcium, chloride, pH, and TDS

The New FGD Pond opened in April 2021 in accordance with the CCR Rule requirements. TRC conducted statistical evaluation of eight baseline groundwater sampling events that were collected from the New FGD Pond monitoring wells between April 28, 2021, and September 23, 2021. The samples were analyzed for the CCR Rule Appendix III and Appendix IV parameters. The data from the baseline events were statically evaluated to determine the background threshold values (BTVs) for Appendix III constituents and groundwater protection standards (GWPS) for Appendix IV constituents. A *Baseline Statistical Evaluation Report* presenting the results of the baseline evaluation was prepared by TRC dated January 2022 and included the baseline evaluation in the 2021 Annual Report.

Table 1 presents BTVs calculated based on the background data. **Table 2** presents the data set for the second detection monitoring event and highlights results that are potential SSIs.

DESC conducted a Well Network Evaluation in August 2022 to reevaluate the monitoring system for this CCR unit. The following recommendations were presented based on the Evaluation:

- Replace the current background monitoring wells (MW-FGD-16 and MW-FGD-21) with two new monitoring wells placed directly upgradient of the New FGD Pond.

- Remove MW-FGD-19 from the existing CCR well network as this well may intercept groundwater from clay fill material.
- Install a new downgradient monitoring well along the southern edge of the CCR Unit boundary.

The new wells will be installed during December 2022. Meanwhile, an Alternative Source Demonstration (ASD) should be prepared for the potential SSIs.

Table 1
Background Threshold Values

Table 1
Background Threshold Values
Dominion Energy South Carolina
Williams Station New FGD Pond

CONSTITUENT	PERCENT DETECTED	DISTRIBUTION	TREND	BACKGROUND THRESHOLD VALUE	BASIS
Boron (mg/L)	100	Normal	None	0.0667	95% UPL (k = 20)
Calcium (mg/L)	100	Nonnormal	None	41.7	95% USL
Chloride (mg/L)	100	Nonnormal	None	33.3	95% USL
Fluoride (mg/L)	100	Normal	None	0.646	95% UPL (k = 20)
pH (s.u.)	100	Nonnormal	None	4.67 - 5.82	Min - Max result
Sulfate (mg/L	100	Nonnormal	None	89.2	95% USL
TDS (mg/L)	100	Normal	None	329	95% UPL (k = 20)

mg/L = milligrams per liter.

pH expressed in standard units (s.u.).

UPL = upper prediction limit.

USL = upper statistical limit.

Table 2
September 2022 Downgradient Results and Potential SSIs

Table 2
September 2022 Downgradient Results and Potential SSIs
Dominion Energy South Carolina
Williams Station New FGD Pond

WELL	CONSTITUENT / BTV / RESULT (mg/L except as noted)[1]						
	BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
	0.0667	41.7	33.3	0.646	4.67 - 5.82	89.2	329
BACKGROUND WELLS							
MW-FGD-16	0.0514	15.1	24.5	0.330	4.80	48.9	193
MW-FGD-21	0.0328	45.4	3.01	0.047 J	5.32	84.8	243
DOWNGRADIENT WELLS							
MW-FGD-17	0.256	151	148	0.511	6.18	15.9	948
MW-FGD-18	6.980	391	1,750	0.420	6.11	175	3,720
MW-FGD-19	0.172	163	704	0.096	5.47	58.2	1,550
MW-FGD-19D	1.610	112	600	0.64	6.85	26.4	1,320
MW-FGD-20AR	1.710	172	383	0.184	6.47	10.5	1,270

Shaded cells indicate an SSI.

[1] pH expressed in standard units (s.u.).

J Estimated concentration.